



**ASPRS 2007
Annual Conference –
Identifying Geospatial
Solutions**

Final Program

**May 7-11, 2007
Marriott Waterside
Hotel
Tampa, Florida**



asprs

Dear Colleagues,

On behalf of the Conference Planning Committee and the ASPRS Florida Region welcome to the 2007 Annual Conference. We have assembled an exciting agenda that includes workshops, both classified and non-classified technical sessions, "Hot Topic" discussions, socials and other stimulating events to help make this a relevant and memorable conference.

We wish to express our appreciation to all members of the organizing committee, student volunteers, sponsors, and all of the presenters for their help to make this a successful conference. Further, we wish to extend a special thanks to our Technical Program Co-chairs, Dr. Bon Dewitt and Dr. Scot Smith for their hard work to develop outstanding program tracks that include Remote Sensing, DEMs, Data Processing and Analysis, GIS, GPS, Photogrammetry, Survey, Data Management, Education, Data Fusion, Data Mining and other related disciplines. We recognize that effective geospatial solutions depend, in part, on the interdependence of these technologies and therefore named the conference theme: Identifying Geospatial Solutions. It is our intent that the resultant papers, posters, panel discussions, and other sessions solidify this conference theme and support ASPRS's core mission to advance knowledge and improve understanding of mapping sciences and to promote the responsible application of these technologies.

Our Keynote speakers for Wednesday, John Curlander of Microsoft and Michael Jones of Google Earth, will discuss the value of geospatial data to the general public. On Thursday, the Keynote speaker is Assistant Administrator of the National Ocean Service Jack Dunnigan, who oversees the Ocean Service, which includes the National Geodetic Survey and its Remote Sensing Division. Mr. Dunnigan's appearance is most appropriate because 2007 marks the 200th anniversary of the establishment of the Office of Coast and Geodetic Survey, NOAA's predecessor agency founded by Thomas Jefferson. Also on Thursday, incoming ASPRS President Marguerite Madden will deliver her Presidential Address.

We encourage you to take advantage of the many networking opportunities, including speed networking for students and young professionals, the Hot Topic discussions, and other events that this conference offers to get better acquainted with your colleagues and to meet new ones. The Florida Region is hosting a welcome reception with live music on Tuesday evening, May 8th. We also encourage you to explore the conference exhibit hall where many commercial, government and not-for-profit organizations will demonstrate geospatial technology, systems, techniques and applications reflecting state-of-the art innovations of our dynamic industry. Plan to attend the Exhibitors' Reception on Wednesday evening May 9th and a grand conference social is scheduled for Thursday evening, May 10th. This will take place at the Florida Aquarium, a short distance from the Conference hotel. Additionally, Channel Side and historic Ybor City are a relatively short distance from the conference hotel and offer a wide variety of restaurants and entertainment. We are glad that you are here!



Gary Florence



Drew Fisher

A handwritten signature in blue ink, appearing to read "Gary Florence".

Gary Florence
Conference Chairman
ASPRS Florida Region National Director

A handwritten signature in blue ink, appearing to read "Drew Fisher".

Drew Fisher
Conference Vice-chairman
ASPRS Florida Region President

Greetings and welcome to Tampa!

It is with great pleasure that I welcome you to this conference and a warm, wonderful host city. The past year has been a busy one for me, both in terms of my role with ASPRS, but, also in my “day job” with the U.S. Geological Survey. I believe the amount of activity ongoing as I have worn both of these hats throughout the year is reflective of an awakening of a much broader segment of our society to all things “map- and spatial- position-related” – especially in digital form and as it relates to imagery. While many of us have referred to the rise of Google Maps, Google Earth, and Virtual Earth in casual conversation, I believe we have just seen the tip of the iceberg in terms of what this will mean to our industry in the future. The ease of access to large volumes of both imagery and other remotely sensed data, including lidar, has definitely increased use of this information, and as predicted in the ASPRS Ten-Year Industry Forecast, will also increase demand. ASPRS has been, and continues to be, in a leadership position on both policy and technical issues related to this phenomenon. The Society provided valuable information to the White House Office of Science and Technology Policy’s Future of Land Imaging Working Group by conducting a survey to estimate the benefits of moderate-resolution satellite imagery. The 2006 fall conference in San Antonio, co-hosted by the MAPPS organization, focused on digital surface modeling and automated feature extraction from remotely sensed data, including lidar. And, in case any of you have missed it, the lidar “boom” has begun, with large area data collection using this type of sensor becoming increasingly commonplace. ASPRS published THE primary source of technical information for the industry about elevation data, *Digital Elevation Model Technologies and Applications, 2nd Edition*, this year with special thanks to David Maune, the outstanding editor of this publication. Another, perhaps less well-publicized effort ASPRS initiated in the past year, is the update of the “Guidelines for Procurement of Photogrammetric Services from Private Professional Sources,” approved by the ASPRS Board of Directors in September, 1986 and last published in *PE&RS* in 1987. This document describes best practices for the procurement of photogrammetric and mapping services (and products). As President, I commissioned a special committee, co-chaired by Doug Smith and Dan Paulsen of the Professional Practices Division, and including representation from MAPPS and ACSM, to update this document. The charter requests that the committee update technological references, make definitions consistent with NCEES Model Law and Model rules, address the distinction between professional services and products, and provide guidance for organizations procuring photogrammetric and mapping services. The underlying issue here, as many of you are aware, is currently a very controversial topic within the photogrammetric and mapping community. Historically, ASPRS has led the way in working collaboratively with others in our profession to work through difficult issues. This philosophy and strategy was exemplified in the ASPRS participation in the Multi-Organization Task Force (MOTF) advising NCEES. This approach seems to have worked well for the members in the past and is certainly favored by ASPRS for working through these issues in the future. The special “Guidelines...” committee will produce a revised document this year. ASPRS will publish this in *PE&RS* for community-wide review and comment, thus, ensuring we get input from all ASPRS members.



Finally, I would like to welcome Marguerite Madden into her role as President of the Society. Marguerite is an amazing and talented individual and has contributed tremendously to the Society even before stepping into her role as President! I congratulate her and look forward to working alongside her, the other ASPRS officers and Board members, and the exemplary ASPRS staff through the next year.

Kari Craun
ASPRS President

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Sponsors



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Gold Sponsorship
An Evening at the Tampa Aquarium



Silver Sponsorship
Exhibit Hall Reception &
Beverage Breaks in the Exhibit Hall



Bronze Sponsorship
Lanyards

Frequently Asked Questions

Where is the ASPRS 2007 Annual Conference Registration Desk?

The ASPRS Conference Registration Desk is located on Level Two of the Tampa Marriott Waterside Hotel.

What are the Conference Registration Desk Hours?

Sunday, May 6	4:00 pm to 7:00 pm
Monday, May 7	6:30 am to 5:00 pm
Tuesday, May 8	6:30 am to 5:00 pm
Wednesday, May 9	6:30 am to 5:45 pm
Thursday, May 10	7:00 am to 5:00 pm
Friday, May 11	7:00 am to 1:00 pm

Note: Registration materials are available during the above hours only

What are the Exhibit Hall Hours?

Wednesday, May 9	10:00 am to 7:00 pm
Thursday, May 10	10:00 am to 5:00 pm
Friday, May 11	9:30 am to 1:00 pm

Are Workshops included with the conference registration fees?

No. Workshops require a separate registration. Availability is based on space.

Is there a charge for the User Group Meetings?

No, the user group meetings are free of charge, however some require advanced reservations. Please see pages 27 and 30 of this program for details.

Are Daily Registrations permitted for all categories, e.g., presenters, students?

Yes. Daily registrations may be done on-site.

What does the Daily Registration include?

Daily Registrations include select day's keynote/plenary and technical sessions, exhibits and proceedings. Social function tickets for the same day as the Daily Registration may be purchased for an additional charge on a space available basis.

May I bring a Guest to the conference?

Yes, guests are always welcome. A separate registration fee has been set for all guests. This fee includes the admission to the Welcome to Tampa Region Reception, Exhibit Hall, the Exhibitors' Reception, and the Evening at the Florida Aquarium. Admission to the keynote, plenary and technical sessions is not included with this registration. If guests wish to attend any of these sessions, they must register at the appropriate rate. Children are not permitted to attend the workshops, keynote, general or technical sessions. Children under 12 years of age are not permitted in the Exhibit Hall. Those over 12 years of age must have a badge and have paid the appropriate fee. Children of all ages are welcome to attend the Evening at the Florida Aquarium but must register in advance and pay the required fee.

Is there an additional charge for the Social Events?

If you are registered as Full, Presenter Full, or Spouse/Guest, all social events are included in the registration. All student and daily registrants, Exhibit Booth Staff (only), unregistered guests, and children must purchase tickets if they wish to attend the Evening at the Florida Aquarium. The ticket cost is \$65. The ticket cost for children under 12 is \$20 each. All children over 12 must have a full price ticket. All tickets must be purchased in advance no later than 2:00 pm on Wednesday, May 9. No tickets will be sold at the Aquarium.

Where should Volunteers Report?

All Conference Volunteers should report to the Volunteer Coordinators in the ASPRS Staff Office Level Two of the Marriott Waterside Hotel when they arrive at the hotel to coordinate their work assignments.

Do Presenters have a Preparation Room?

Yes. The ASPRS Presenters Room is located in the Bayshore Board Room in the Marriott Waterside Hotel from 8 am to 5 pm Monday May 7 through Thursday, May 10 and from 8 am to noon on Friday, May 11. This room is available on a first come basis and is equipped with an LCD projector and screen. We encourage all speakers to preview their materials prior to their presentation.

Is there a Press Room?

Yes, the Greco Board Room in the Marriott Waterside Hotel is provided for use by members of the press who have registered for the conference. It is available from 8 am to 5 pm Wednesday, May 9 and Thursday May 10 and from 8 am to 12 noon on Friday, May 11. All attendees are encouraged to place applicable press releases in this room for distribution to the press. Press conferences and interviews with ASPRS officers and Keynote speakers may be arranged, time permitting. Please contact Anna Marie Kinerney, ASPRS Meeting Manager through the Conference Registration Desk for details.

Frequently Asked Questions

Does ASPRS have a staff office on-site in the hotel?

Yes. The Staff Office is located on Level Two near the ASPRS Registration Desk of the Marriott Waterside Hotel.

Why do I need a badge?

You paid your registration fee and your badge is proof of it. For entrance to the Keynote, plenary and technical sessions and Exhibit Hall, you need to wear your name badge.

What if I forget or lose my badge?

A charge of \$5 will be made for replacement of lost badges.

Why do I need tickets for certain events?

Your tickets are proof of payment for certain events and must be presented at the collection point. Lost tickets will not be replaced.

How do I get into the Exhibit Hall if I am not registered for the conference?

Daily Exhibit Hall badges may be purchased at the ASPRS Registration Desk on Level Two of the Marriott Waterside Hotel. Everyone entering the Exhibit Hall must have a name badge, including children from 12 to 18 years of age. Children under 12 years of age are not permitted in the Exhibit Hall at any time due to insurance and safety regulations.

Will it be possible to post resumes and job openings?

Yes, Boards will be available in the Grand Ballroom Foyer of the Marriott Waterside Hotel for posting all resumes and job openings.

How do I get a copy of the CD-ROM Proceedings?

All Full Registrants will receive a copy on-site with the registration materials. Additional copies can be purchased for \$20 at the ASPRS Registration Desk and the ASPRS Exhibit Booth, #116 in the Exhibit Hall.

Is there a Lost and Found?

Please contact Hotel Security through the hotel house phones for all lost and found items.

How do I contact another Conference attendee?

A message board is located in the ASPRS Registration Area – Level Two of the Marriott Waterside Hotel.

How can someone from outside the hotel contact me?

Messages cannot be personally delivered to Conference attendees due to the varied schedules of everyone in attendance. Messages can be left in the rooms of those staying at the Tampa Marriott Waterside Hotel through the hotel telephone operator. Packages and fax messages can be sent to individuals staying at the hotel. They should be addressed to the individual at the following address:

Tampa Marriott Waterside Hotel and Marina
700 South Florida Avenue
Tampa, Florida 33602 USA
813-221-4900
813-204-6342 (Fax)

How do I get help in an Emergency?

Contact an ASPRS staff person or pick up any hotel house phone and ask for Security.

ASPRS Awards and Scholarships

Awards for Outstanding Papers, Professional Achievement, Service and Region activities are determined by committee selection; scholarships and academic awards are also determined by committee selection but are chosen from among current applications. For details on the application process, see: <http://www.asprs.org/membership/scholar.html>

SAIC Estes Memorial Teaching Award

2007 Recipient: **Dr. Marvin Bauer**

Dr. Bauer is a highly regarded Professor of Remote Sensing at the University of Minnesota and very much in the forefront of precision agriculture as well as the use of remote sensing for forestry applications. He is the Director of the Environmental Resources Spatial Analysis Center (ERSAC) which links the capabilities and resources of five colleges and nine departments for doing remote sensing, spatial analysis and modeling. Since 1980 he has been the Editor of the journal Remote Sensing of the Environment. Prior to joining the faculty at the University of Minnesota, Dr. Bauer was a Research Agronomist and Program Leader at the Laboratory for Applications of Remote Sensing (LARS) at Purdue University from 1970 to 1983. He played a key role in the definition of effective techniques for analysis of remotely sensed data for agricultural applications. He was a primary lead scientist in the "Corn Blight Watch" in the 70's and also in the Large Area Crop Inventory Experiment (LACIE), one of the key projects in the early years of remote sensing documenting the potentials for effective use of satellite remote sensor data.

He served on the ASPRS Awards Policy Committee from 1988 to 1995 (Chair, 1993-1995) and earlier in various leadership capacities of the Plant Sciences Section/Applications Division from 1976-1978. In 1995, he received the Alan Gordon Memorial Award for his achievements in remote sensing. In 1996, Dr. Bauer was awarded the Distinguished Public Service Medal by NASA recognizing his outstanding scientific contributions over the previous 25 years to NASA's terrestrial remote sensing programs. From 1999 to 2003, he was the Principal Investigator for NASA's Upper Great Lakes Regional Earth Sciences Applications Center.

In 2006, the Minnesota GIS/LIS Consortium awarded Dr. Bauer a Lifetime Achievement Award based on his extensive work as a teacher, researcher and model citizen. In particular, they cited the results of his land cover classification and water quality monitoring projects which are available in web-based mapping applications at <http://land.umn.edu> and <http://water.umn.edu>. The "LakeBrowser" enables users to search for water quality information on lakes across Minnesota and has over 20,000 visits a month.

The SAIC Estes Memorial Teaching Award was inaugurated in 2003 and is named in honor of Professor John E. ("Jack") Estes, teacher, mentor, scientist, and friend of the American Society for Photogrammetry and Remote Sensing.

Purpose: This award is designed to recognize individual achievement in the promotion of remote sensing and GIS technology, and applications through educational efforts. Award recipients are chosen based on documented excellence in education, teaching, mentoring and, training.

Donor: Science Applications International Corporation (SAIC) through the ASPRS Foundation and consists of a presentation plaque and a cash award of \$2,000.

Past Award Recipients:

2003 – Roger M. Hoffer

2004 – John R. Jensen

2005 – Thomas M. Lillesand

2006 – Roy Welch

Robert N. Colwell Memorial Fellowship

2007 Recipient: **Michael Falkowski**

Michael Falkowski is a doctoral candidate in the College of Natural Resources, with specializations in remote sensing and forestry at the University of Idaho in Moscow, Idaho. His expected completion date is December, 2007.

Falkowski received his undergraduate degree in Geography from the University of Wisconsin-Stevens Point. There he had the opportunity to participate in geologic remote sensing research projects in Texas and Morocco, Africa. Following graduation, he spent several years gaining practical experience as a GIS technician/specialist for several governmental agencies in Wisconsin. In the fall of 2002 he returned to school as a graduate student in the Forestry Department at the University of Idaho. Falkowski's master's research focused on the use of ASTER satellite imagery and gradient modeling for mapping and characterizing wildland fire fuels; he received his MSc in December 2004.

Falkowski's PhD research uses data from LIDAR and high-resolution hyperspectral/multispectral airborne sensors to improve the accuracy of remote estimates of individual tree parameters (such as height, crown diameter and stem diameter), to facilitate the extrapolation of fine-scale forest measurements to broader scales, and to provide a means of accurately quantifying non-timber biomass (such as shrubs and woody debris) in forest ecosystems. This research also involves the use of novel data processing techniques (such as data fusion and 2-dimensional wavelet analysis) and innovative statistical prediction and imputation strategies (e.g. mixed-effects models and classification and regression trees). The ultimate goal of this research is to provide land managers with practical methods of monitoring and predicting future carbon stocks; necessary information for understanding the global carbon cycle.

Falkowski has an exceptional record of scholarship, both as an undergraduate and as a graduate student. He possesses an impressive list of published and pending papers and presentations, and has received superb recommendations from his professors and professional references. Mr. Falkowski also has received a number of academic honors and awards; is a member of several professional and scientific societies, including ASPRS; and has significant teaching experience.

Michael Falkowski is an outstanding young scientist who will no doubt go far in advancing the application of remote sensing in forestry and natural resources, which was the life work of Bob Colwell, in whose name this fellowship is awarded.

Over the course of more than a half century, Dr. Robert N. Colwell developed a reputation as one of the world's most respected leaders in remote sensing, a field that he stewarded from the interpretation of aerial photographs during World War II, to the advanced acquisition and analysis of many types of geospatial data from military and civilian satellite platforms. His career included nearly 40 years of teaching and research at the University of California, Berkeley, a distinguished record of military service reaching the rank of Rear Admiral, and prominent roles in private industry and as a consultant for many U.S. and international agencies. Among the many awards bestowed upon Dr. Colwell, he had the distinction of being one of the 25 Honorary Members of ASPRS, chosen from the Society's 6000 members.

Purpose: Established in 2006 to encourage and commend college/university graduate students or post-doctoral researchers who display exceptional interest, desire, ability, and aptitude in the field of remote sensing

Awards Program

or other related geospatial information technologies, and who have a special interest in developing practical uses of these technologies.

Donor: The ASPRS Foundation, from funds donated by students, associates, colleagues and friends of Robert N. Colwell.

The Award consists of a grant of \$4,000 and a one-year student or associate membership (new or renewal) in ASPRS.

Past Award Recipients:

2006 – Desheng Liu

The BAE Systems Award

2007 Recipient: Not available at press time.

Purpose: To reward top quality research and publication by young students (under age 35 as of the application deadline) at master's or doctoral level and to encourage researchers to use the ASPRS annual conference as a vehicle to publish and present their findings. The recipient's paper will be published in Photogrammetric Engineering & Remote Sensing (PE&RS), the official journal of ASPRS.

Donor: BAE Systems through the ASPRS Foundation

The award was first offered in 2005 and consists of a certificate and a grant of \$2,000.

Past Award Recipients:

2005 – Nora Csanyi

2006 – Pravara Thanapura

73rd Business Meeting and 18th Awards Luncheon Wednesday, May 9th

Welcome

Kari J. Craun

Lunch

Introduction of Guests

Kari J. Craun

Presentation of ASPRS Awards

Alan R. Stevens

Kari J. Craun

Outstanding Papers Awards

Boeing Award for Best Paper in Image Analysis and Interpretation

John I. Davidson President's Award for Practical Papers

Leica Geosystems Award for Best Scientific Paper in Remote Sensing

ESRI Award for Best Scientific Paper in GIS

Talbert Abrams Award

Scholarships and Academic Awards

William A. Fischer Memorial Scholarship

Robert E. Altenhofen Memorial Scholarship

Ta Liang Memorial Award

Paul R. Wolf Memorial Scholarship

Kenneth J. Osborn Memorial Scholarship

GeoEye Award

Leica Geosystems Internship

Intergraph Scholarship (formerly the Z/I Imaging Scholarship)

KODAK International Educational Literature Award

Service Awards

Outstanding Service Award

Ford Bartlett Membership Award

Outstanding Workshop Instructor Award

President's Report

Kari J. Craun

Executive Director's Report

James R. Plasker

Recognition of Retiring Members of the Board of Directors and Executive Committee

Kari J. Craun

Marvin Bauer

Lloyd H. Blackburn

Paul D. Brooks

Terry Ann Coleman

Gary Florence

David Greenlee

Lawrence R. Handley

Brian Huberty

Michael Hut

Karen L. Schuckman

Teller's Report

Larry Hothem

Installation of New and Re-elected Directors

Kari J. Craun

Paul D. Brooks, Alaska Region

Lucinda A. Clark, Intermountain Region

Robert C. Eadie, Primary Data Acquisition Division

Michael Flynn, Sustaining Members Council Chair

Lawrence R. Handley, Mid-South Region

Paula Smit, Geographic Information Systems Division

Thomas J. Young, Florida Region

David Stolarz, North Atlantic Region

Qihao Weng, Western Great Lakes Region

Installation of New Assistant Directors and Vice Chair of the Sustaining Members Council

Kari J. Craun

TBD, Sustaining Members Council

Maribeth Price, Geographic Information Systems Division

Gregory Stensaas, Primary Data Acquisition Division

Installation of President-Elect & Vice President

Kari J. Craun

Kass Green, President-Elect

Bradley Doorn, Vice-President

Installation of Incoming President

Kari J. Craun

Marguerite Madden

Presentation of Birdseye Citation & President's Key to Retiring President

Marguerite Madden

Kari J. Craun

Adjournment

Boeing Award for Best Paper in Image Analysis and Interpretation

2007 Recipients: **Ola Ahlqvist and Mark Gahegan** for “Probing the Relationship Between Classification Error and Class Similarity,” PE&RS, 71 (12), 1365-1375.

Purpose: Established in 1965 as the Autometric Award, this grant recognizes development and achievement in the field of photographic interpretation through special acknowledgment of superior publications on the various aspects of image analysis and interpretation.

Donor: Boeing S&IS Mission Systems through the ASPRS Foundation

The Award includes an inscribed certificate and a cash award of \$500.

Recent Past Award Recipients:

2000 – John B. Collins, Curtis E. Woodcock
 2001 – Paul Treitz, Philip Howarth
 2002 – Mark E. Jakubauskas, David R. Legates, Jude H. Kastens
 2003 – Youngsinn Sohn, N. Sanjay Rebello
 2004 – Paul C. Sutton, Chris Elvidge, Tom Obremski
 2005 – Rebecca N. Handcock, Ferenc Csillag
 2006 – Timothy Warner, Karen Steinmaus

John I. Davidson President’s Award for Practical Papers

2007 Recipients:

First Place:

Brian D. Wardlow, Jude H. Kastens, and Stephen L. Egbert for “Using USDA Crop Progress Data for the Evaluation of Green-up Onset Data Calculated from MODIS 250-Meter Data,” PE&RS, 72 (11), 1225-1234.

Second Place (tie)

J. Chris McGlone, Tom Barclay, Ed Freeborn, Clifford W. Greve, Ayman Habib, Terry Keating, Roberta Lenczowski, Bryan Logan, Toni Schenk, Mladen Stojic, and Alan Voss for “ASPRS Report to the U.S. Geological Survey on Digital Orthoimagery,” PE&RS, 72 (2), 95-108.

And

Ernesto Rodriguez, Charles S. Morris, and J. Eric Belz for “A Global Assessment of SRTM Performance,” PE&RS, 72 (3), 249-260.

Purpose: The John I. Davidson Award was established in 1979 to encourage and commend individuals who publish papers of practical or applied value in Photogrammetric Engineering & Remote Sensing (PE&RS).

Donor: The ASPRS Foundation

The John I. Davidson Award First Place includes an engraved pewter tankard, a cash award of \$500 and a hand-engrossed certificate. 2nd place is a cash award of \$300 and a hand-engrossed certificate. 3rd place is a cash award of \$200 and a hand-engrossed certificate.

Recent Past Award Recipients:

2003
 1st place – Assaf Anyamba, Kenneth J. Linthicum, Robert Mahoney, Compton J. Tucker, Patrick W. Kelley
 2nd place – Fabio Maselli
 3rd place – B. Guindon, C. M. Edmonds

2004
 1st place – Ross Nelson, Geoffrey Parker, and Milton H
 2nd place – Marco Albani and Brian Klinkenberg
 3rd place – DongMei Chen and Douglas Stow

2005

1st place – A. Edirisinghe, J.P. Louis, and G.E. Chapman
 2nd place – Thomas J. Cova, Paul C. Sutton, and David M. Theoba
 3rd place – K.S. Schmidt, A.K. Skidmore, E.H. Kloosterman, H. van Oosten, L. Kumar, J.A.M. Janssen

2006

1st place – Rongxing Li, Steven W. Squyres, Raymond E. Arvidson, Brent A. Archinal, Jim Bell, Yang Cheng, Larry Crumpler, David J. Des Marais, Kaichang Di, Todd A. Ely, Matt Golombek, Eric Graat, John Grant, Joe Guinn, Andrew Johnson, Ron Greeley, Randolph L. Kirk, Mark Maimone, Larry H. Matthies, Mike Malin, Tim Parker, Mike Sims, Larry A. Soderblom, Shane Thompson, Jue Wang, Patrick Whelley, and Fengliang Xu
 2nd place – Christopher E. Parrish, Grady H. Tuell, William E. Carter, and Ramesh L. Shrestha
 3rd place – Paul M. Dare

Leica Geosystems Award for Best Scientific Paper in Remote Sensing

2007 Recipients:

First Place:

Brian D. Wardlow, Jude H. Kastens, and Stephen L. Egbert, for “Using USDA Crop Progress Data for the Evaluation of Greenup Onset Date Calculated from MODIS 250-Meter Data” PE&RS, 72 (11), 1225-1234.

Second Place:

Rebecca Musy, Randolph Wynne, Christine Blinn, John Scrivani, and Ronald McRoberts for “Automated Forest Area Estimation Using Iterative Guided Spectral Class Rejection,” PE&RS, 72 (8), 949-960.

Third Place:

Lei Ji and Kevin Gallo for “An Agreement Coefficient for Image Comparison,” PE&RS, 72 (7), 823-833.

Purpose: Established in 1991 as the ERDAS Award for Best Scientific Paper in Remote Sensing, it became the Leica Geosystems Award for Best Scientific Paper in Remote Sensing in 2002. This award encourages and commends individuals who publish papers of scientific merit that advance our knowledge of remote sensing technology.

Donor: Leica Geosystems GIS & Mapping through the ASPRS Foundation

The Leica Geosystems Award first prize is \$500 and a hand-engrossed certificate; second prize is \$300 and a hand-engrossed certificate; third prize is \$200 and a hand-engrossed certificate.

Recent Past Award Recipients:

2003
 1st Place – Simon Brooker, Simon I. Hay, Louis-Albert Tcheum Tchuenta and Raoul Ratard
 2nd Place – Nathaniel A. Brunsell and Robert R. Gillies
 3rd Place – Barry N. Haack, Elizabeth K. Solomon, Matthew A. Bechdol and Nathaniel D. Herold

2004
 1st Place – John Rogan, Jennifer Miller, Doug Stow, Janet Franklin, Lisa Levien and Chris Fischer
 2nd Place – Annemarie Schneider, Mark A. Friedl, Douglas K. Mclver and Curtis E. Woodcock
 3rd Place – Ling Bian

2005

- 1st Place – Giles M. Foody
2nd Place – Robert L. Huguenin, Mo Hwa Wang, Robert Biehl, Scott Stoodley, and Jeffrey N. Rogers
3rd Place – Thomas J. Cova, Paul C. Sutton, and David M. Theobald

2006

- 1st Place – Elijah Ramsey III and Amina Rangoonwala
2nd Place – Lei Ji and Albert J. Peters
3rd Place – Francesca Pozzi and Christopher Small

The ESRI Award for Best Scientific Paper in GIS

2007 Recipients:

First Place:

Suzanne P. Wechsler and Charles N. Kroll, "Quantifying DEM Uncertainty and Its Effect on Topographic Parameters," PE&RS, 72 (9), 1081-1090.

Second Place:

Jeremy Mennis, "Socioeconomic-Vegetation Relationships in Urban, Residential Land: The Case of Denver, Colorado," PE&RS, 72 (8), 911-921.

Third Place:

Kurt H. Riitters, James D. Wickham, and Timothy G. Wade, "Evaluating Ecoregions for Sampling and Mapping Land-cover Patterns," PE&RS, 72 (7), 781-797.

Purpose: Established in 1991, the ESRI Award honors individuals who publish papers of scientific merit that advance our knowledge about GIS technology.

Donor: The Environmental Systems Research Institute, Inc. (ESRI) through The ASPRS Foundation

ESRI Award first prize is \$500 and a hand-engrossed certificate; second prize is \$300 and a hand-engrossed certificate; third prize is \$200 and a hand-engrossed certificate.

Recent Past Award Recipients:

2003

- 1st Place – Daniel L. Civco, James D. Hurd, Emily Hoffhine Wilson, Chester L. Arnold, and Michael P. Prisloe, Jr.
2nd Place – Jeanne Epsten, Karen Payne, Elizabeth Kramer
3rd Place – Mary C. Henry, Stephen R. Yool

2004

- 1st Place – Anthony Gar-On Yeh and Xia Li
2nd Place – Lucie Plourde and Russell G. Congalton
3rd Place – Ross S. Lunetta, Jayantha Ediriwickrema, John Iames, David Johnson, John G. Lyon, Alexa McKerrow, and Andrew Pilant

2005

- 1st Place – Dorota A. Grejner-Brzezinska, Ron Li, Norbert Haala, and Charles Toth
2nd Place – Christian Heipke
3rd Place – Colin Homer, Chengquan Huang, Limin Yang, Bruce Wylie, and Michael Coan

2006

- 1st Place – Bisheng Yang, Wenzhong Shi, and Qingquan Li
2nd Place – Rodolphe Devillers, Yvan Bedard, and Robert Jeansoulin
3rd Place – Xutong Niu, Ruijin Ma, Tarig Ali, and Rongxing Li

The Talbert Abrams Award

2007 Recipients:

Grand Award:

Jie Shan, Chiung-Shiuan Fu, Bin Li, James Bethel, Jeffrey Kretsch and Edward Mikhail, "Principles and Evaluation of Autostereoscopic Photogrammetric Measurement", PE&RS, 72(4):365-372.

Second Place:

C. S. Faser and S. Al-Ajlouni, "Zoom-dependent Camera Calibration in Digital Close-Range Photogrammetry", PE&RS, 72(9): 1017-1026.

Third Place:

Hans-Gerd Maas and Uwe Hampel, "Photogrammetric Techniques in Civil Engineering Material Testing and Structure Monitoring", PE&RS, 72(1): 39-45.

Purpose: The Talbert Abrams Award was established in 1945 to encourage the authorship and recording of current, historical, engineering, and scientific developments in photogrammetry. The Award is determined from papers published in Photogrammetric Engineering & Remote Sensing (PE&RS).

Donor: The ASPRS Foundation

The award consists of a check for \$3,000 for the Grand Award and an engraved plaque for each place.

Recent Past Award Recipients:

2003

- Grand Award – C. Vincent Tao
First Honorable Mention – Gustavo Olague
Second Honorable Mention – Hans-Gerd Maas, Zhuowen Tu, Rongxing Li

2004

- Grand Award – Arie Croitoru and Yerach Doytsher
First Honorable Mention – acek Grodecki and Gene Dial
Second Honorable Mention – Ayman F. Habib, Young-ran Lee and Michel Morgan

2005

- Grand Award – Yun Zhang, C. Vincent Tao, and J. Bryan Mercer
Honorable Mention – Sorin C. Popescu and Randolph H. Wynne

2006

No award given

William A. Fischer Memorial Scholarship

2007 Recipient: **Eva Paska**

Ms. Eva Paska is a doctoral candidate at the Ohio State University, Department of Civil and Environmental Engineering and Geodetic Science, with a focus on photogrammetry and remote sensing. She has an extremely strong background in photogrammetry and geodesy, with an impressive history of grade-point averages in college courses, both at Ohio State as well as the University of Budapest. She also has an excellent list of conference publications, including lead author in several proceedings papers. She provided an excellent proposal for continuing studies, and has excellent faculty references. Her faculty advisor is Associate Professor Dr. Dorota Grejner-Brzezinska.

Purpose: The William A. Fischer Scholarship facilitates graduate studies and career goals of a worthy student adjudged to address new and innovative uses of remote sensing data and techniques that relate to the natural, cultural, or agricultural resources of the Earth. It was established in 1984.

Donor: The ASPRS Foundation through individual and corporate contributions in memory of William A. Fischer.

The William A. Fischer Memorial Scholarship consists of a \$2,000 cash prize and a hand-engrossed certificate.

Recent Past Award Recipients:

- 2000 – John Rogan
- 2001 – Peter J. Doucette
- 2002 – Ludmila Monika Moskal
- 2003 – Bing Xu
- 2004 – Carl J. Legleiter
- 2005 – Matthew David Dunbar
- 2006 – Nora Csanyi

Robert E. Altenhofen Memorial Scholarship

2007 Recipient: **Shahram Moafipoor**

Mr. Shahram Moafipoor is a doctoral candidate at the Ohio State University, majoring in Civil and Environmental Engineering and Geodetic Science, with a specialization in photogrammetry. He has an extremely strong background in photogrammetry and georeferencing systems, and excellent academic records at both Ohio State and in Iran. He has an excellent list of publications. He provided a focused research proposal, and has excellent faculty references. His faculty advisor is Associate Professor Dorota Brzezinska.

Purpose: First given in 1986, the Robert E. Altenhofen Memorial Scholarship is intended to encourage and commend college students who display exceptional interest and ability in the theoretical aspects of photogrammetry.

Donor: The ASPRS Foundation. This award was originally established by Mrs. Helen Altenhofen as a memorial to her husband, Robert E. Altenhofen, past president of ASPRS. He was an outstanding practitioner of photogrammetry and made notable contributions to the mathematical aspects of the science.

The Altenhofen Scholarship consists of a cash prize of \$2,000 and a hand-engrossed certificate.

Recent Past Award Recipients:

- 2000 – Panayotis Partsinevelos
- 2001 – Iliana Theodoropoulou
- 2002 – Young Hu
- 2003 – Cameron Ellum
- 2004 – Michel Morgan
- 2005 – Eva Paska
- 2006 – Yushin Ahn

Ta Liang Award

2007 Recipient: **Jonathan B. Thayn**

The Ta Liang Memorial Award for 2007 is presented to Jonathan B. Thayn. Mr. Thayn's selection was based on his academic achievements, planned program of research-related travel, and extracurricular activities.

Mr. Thayn is a Ph.D candidate in Geography and Remote Sensing in the Department of Geography at the University of Kansas. He is exploring the use of remote sensing to create maps of vegetation characteristics to inform ecosystem dynamics models. He is particularly interested in using vegetation seasonal dynamics and phenology, as expressed in

hyper-temporal remotely sensed datasets, to characterize wilderness and agriculture land cover. Mr. Thayn plans to use the award for travel to Manaus, Brazil during the 2007 dry season to collect field data in support of his research.

In addition to his studies, Mr. Thayn has been involved in numerous projects including the Scale and Complexity in Arid Land Ecosystems (SCALE) project, an NSF funded initiative for which he examined relationships between remotely sensed landscape-scale measurements of biocomplexity and cattle stocking rates on the rangelands of Kansas. In the Red Cedar Invasion Project, he used red cedar's year-round photosynthetic capacity to separate it from native, deciduous vegetation. He is currently working as part of a team, funded by the Geneva International Center for Humanitarian Demining, to perfect a method of remotely mapping land mine fields using GIS, GPS and laser binoculars. He has also been active as a student co-director of the Remote Sensing Specialty Group of the AAG, and is presently Communications Councilor of the ASPRS Student Advisory Council.

Established in memory of Ta Liang, a skilled civil engineer, an excellent teacher, and one of the world's foremost airphoto interpreters, the award consists of a \$500 grant and a hand-engrossed certificate.

Purpose: To facilitate research-related travel by outstanding graduate students in remote sensing, including field investigations, agency visits, participation in conferences, or other travel which enhances or facilitates graduate research.

Donor: Individual and corporate contributions to the ASPRS Foundation in memory of Ta Liang.

Recent Past Award Recipients:

- 2001 – Kristin Eickhorst
- 2002 – L. Monika Moskal
- 2003 – No award given
- 2004 – Ryan L. Perroy
- 2005 – Matthew David Dunbar
- 2006 – Heather Richards

Paul R. Wolf Memorial Scholarship

No award will be made this year

Recent Past Award Recipients:

- 2003 – Brian J. Naberezny
- 2004 – Ji Sang Park
- 2005 – Darion Grant
- 2006 – Jamon Van Den Hoek

Kenneth J. Osborn Memorial Scholarship

2007 Recipient: **Katarina Doctor**

Ms. Doctor is pursuing a Bachelor of Science degree in Geography and GIS at George Mason University in Fairfax, Virginia. Her areas of specialization include an emphasis on GIS, remote sensing, and cartography technology to analyze the causes and societal impacts of natural hazards. She also plans to apply state of the art digital tools to the analysis of spatial information within geomorphology and environmental science. Her paper was strong, indicating exceptional potential for an undergrad. Her faculty contact is Dr. Stephen S. Harlan.

She plans to graduate in 2008, after which she plans to continue her studies at the graduate level. She would like to conduct research that would help limit the negative consequences of natural disasters by expanding her studies outside geographic information science into

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economics and politics. Her references and personal statements also articulated her active interest and participation in outreach activities, such as conferences and professional society events. Of note was her work with the National Speleological Society (related to cave exploring), wherein she made good use of her knowledge and skills in collaboration and communication.

The Award consists of an engrossed certificate and a check in the amount of \$1,000

Purpose: To encourage and commend college students who display exceptional interest, desire, ability, and aptitude to enter the profession of surveying, mapping, photogrammetry, or geospatial information and technology. In addition, the Award recognizes students who excel at an aspect of the profession that Ken demonstrated so very well, that of communications and collaboration.

Donor: The ASPRS Foundation from funds donated by the friends and colleagues of Kenneth J. Osborn. Recognized nationally and internationally, Ken was an outstanding practitioner of surveying, mapping, photogrammetry, and geospatial information and technology, and a great friend of the Society. As a professional cartographer with the U.S. Geological Survey, Ken made significant contributions to these fields. The award was first offered in 2005.

Recent Past Award Recipients:

2005 – Rachel E. Ruppel
2006 – Sean Bolender

The ASPRS GeoEye Award

2007 Recipients: **Govinda Basnet, Tim De Chant, and James Kellner**

Govinda Basnet

Following the theme of studies on reciprocal interaction of institutional arrangements and environmental outcomes, Mr. Basnet conducted a two-year dissertation field research titled “The Struggle for Water Rights in Contested Commons: Changing Institutional Landscape in Upper Mustang, Nepal”. His research project aimed at investigating the dynamics of the struggle for water rights in irrigation systems and the resulting modification of the institutional and environmental landscape. This research employed both comparative and historical approaches integrating qualitative, quantitative and spatial methods.

With the use of spatial analysis methods, his study aims to investigate how different water rights systems influence local land management decisions, by integrating field-collected spatial and qualitative information with high resolution satellite imagery provided by the ASPRS GeoEye Award.

Tim De Chant

The title of Mr. De Chant’s study is “Scaling from trees to landscapes: Using high-spatial resolution satellite imagery to assess the impacts of disturbance on oak physiology.”

He plans to use the imagery obtained from the ASPRS GeoEye Award to complete the following objectives:

1. To assess the accuracy of Ikonos imagery in the identification of natural forest gaps and urban edges;
2. To assess the utility of Ikonos imagery in object-based image analysis (OBIA) of forest canopy gaps; and
3. To uniquely identify and track changes in forest gaps through time using Ikonos imagery and historical aerial photographs and link those changes to the physiological responses of neighboring trees.

James Kellner

The title of Mr. Kellner’s project is “Short term population dynamics

for a rain forest canopy tree using time series satellite remote sensing.” His proposal aims to test the capacity of current-generation satellite remote sensing for characterizing population growth and survival of rain forest canopy trees. It adds IKONOS to multi temporal QuickBird data and an innovative application of ‘capture-mark-recapture’ modeling to estimate demographic rates. The development of this capacity has wide-reaching applications in basic ecological research, conservation and management.

This year, the ASPRS GeoEye Award consists of three grants of data valued up to \$4,000 each, and a certificate inscribed with the name of the recipient.

The Award was established in 1991. In 2001 it became known as the Space Imaging Award for the Application of High Resolution Digital Satellite Imagery and in 2006 it became The ASPRS GeoEye Award

Donor: GeoEye, Inc. through the ASPRS Foundation

Recent Past Award Recipients:

2000 - Jason R. Janke
2001 - Jiansheng Yang
2002 - Mark Kachmar
2003 - Michel F. Morgan
2004 - Jason Janke and Qian Yu
2005 - Candace Newman, Minho Kim, Junmei Tang
2006 - Yuyu Zhou, Qiaoping Zhang, Orien Richmond

The Leica Geosystems Internship

2007 Recipient: **Kaiguang Zhao**

Kaiguang Zhao’s proposal for his research project is “Bayesian Non-linear Classification of Multispectral Remote Sensing Data”. Classification is a fundamental and crucial task for many remote sensing applications. It is also one of our company’s focus areas in research and development. He proposed to investigate the nonlinear models of Bayesian classification for multispectral image classification. The nonlinear Bayesian classification has gained an explosion of interest in other disciplines such as electrical engineering, economics, machine learning and computer science etc., but is still new in the remote sensing community. This new method could improve the classification results of remote sensing images since a nonlinear model offers more flexibility over the traditional linear model. Its implementation has now become much easier due to the increases in computational power. We anticipate that the proposed research and investigation have the potential to benefit both the academic community and our research and development effort in the classification applications.

Kaiguang Zhao has demonstrated strong research and development capability through his numerous publications in the proposed research field and other relevant fields.

This research experience will help him to be successful with his proposal. Kaiguang Zhao has an excellent academic record and received numerous awards for his achievements across his different student phases. His proposal and academic achievements have been appraised very highly by his advisers. All these together give us the strong belief that he will accomplish an excellent research project with the Leica Geosystems through this award.

Purpose: Leica GeoSystems Internship is an eight-week internship for graduate students in photogrammetry. The selected intern works with Leica GeoSystems personnel at a selected Leica GeoSystems facility. The internship consists of a stipend of \$2500 plus an allowance for travel and living expenses for the period of the internship.

Donor: Leica Geosystems GIS & Mapping through the ASPRS Founda-

tion. The internship provides the award winner with an opportunity to carry out a small research project of his/her own choice, or to work on an existing Leica GeoSystems project as part of a team.

Recent Past Award Recipients:

2003 - Michel Morgan
 2004- Cameron Ellum
 2005 -Nora Csanyi
 2006 – Hongwei Zhu

Intergraph Scholarship (formerly the Z/I Imaging Scholarship)

2007 Recipient: **Nora Csanyi**

Ms. Csanyi completed her Masters Degree in Surveying and Geomatics Engineering in June of 2001 from The Budapest University of Technology. She will be completing her PhD degree in Photogrammetry and Remote Sensing in June of 2007 from Ohio State University. Her faculty advisor is Dr. Dorota Grejner-Brzezinska. Ms. Csanyi's academic record is outstanding.

Csanyi's research combines photogrammetry and LiDAR and focuses on the development of new mathematical models and algorithms for digital photogrammetry, LiDAR data processing, sensor calibration, and sensor fusion. Her work is applicable to current needs in the industry for improved accuracy and automation.

The future plans stated by Ms. Csanyi demonstrate her dedication and commitment to the field. She intends to continue her research in academia or private industry to develop tools and methodologies to assess and improve accuracy in real-world photogrammetric applications. She has the ability and potential to make a significant contribution to our industry.

Purpose: The Intergraph Award is designed to facilitate graduate-level studies and career goals adjudged to address new and innovative uses of signal processing, image processing techniques, and the application of photogrammetry to real-world techniques within the earth imaging industry.

Donor: Intergraph Corporation through the ASPRS Foundation
 The Intergraph award carries a \$2,000 cash prize and a hand-engrossed certificate.

Recent Past Award Recipients:

Z/I Imaging Award
 2003- Ludmilla Monika Moskal
 2004- Kristin Eickhorst
 2005- Georgiadis Charalampos
 2006 - Taehun Yoon

Kodak International Educational Literature Award

2007 Recipient: **University of San Carlos, Guatemala**

The Program in Land Administration, Faculty of Agronomy, University of San Carlos, Guatemala City, Guatemala offers a course of study focusing on land administration, which consists of a three-year technical study program in surveying and five years in land administration engineering. Program curriculum includes geography, geographic information systems, photogrammetry, remote sensing, and databases. Two additional programs in crop production systems and natural resources will also be supported by this award. This award will enhance current literature holdings and educational support materials in photogrammetry, photointerpretation, remote sensing, and GIS with access to over 1,200 students

and 90 professors in the Faculty of Agronomy as well as professors who teach in other programs and university regional centers.

Purpose: The KIELA was first bestowed in 1990. Its goal is to improve the quantity and quality of literature in the recipient's library, particularly in the mapping sciences (i.e. photogrammetry, remote sensing, GIS, and related disciplines) by providing ASPRS educational materials and publications.

The KIELA includes \$350 worth of books, manuals, or other literature published by ASPRS; a five-year subscription to PE&RS, proceedings of the Annual Conference and Fall technical meetings for five years; one free registration to the Society's Annual Conference at the time of receiving the award for a member of the institution to whom the award is being given; and a hand-engrossed certificate.

This award has been augmented by

- a generous grant from the Environmental Systems Research Institute (ESRI) of the complete ESRI Press Library collection
- selected titles from the John Wiley and Sons, Publishers, catalog.
- The conference proceedings from the Geospatial Information Technology Association (GITA)
- The conference proceedings from The Association of American Geographers (AAG)

Donor: Eastman Kodak Company, through the ASPRS Foundation

Recent Past Award Recipients:

2000 – State University of West-Center of Parana, Brazil
 2001 – Unique Charity Institute of Geography, Ado-Ekiti, Ekiti State, Nigeria
 2002 – The University of the Witwatersrand, Johannesburg, South Africa
 2003 – The Institute of Surveying and Mapping, Diyatalawa, Sri Lanka
 2004 – The Department of Geography of the Federal University of Technology, Minna, Niger State, Nigeria
 2005 – The Department of Forest Engineering, Federal University of Vicoso, State of Minas Gerais, Brazil
 2006 – The Institute of Geography, National University of Mexico (Instituto de Geografia - Universidad Nacional Autonoma de Mexico)

ASPRS Outstanding Service Award

2007 Recipients:

The Future of Land Imaging Interagency Working Group, Dr. Gene Whitney, Chair, for their efforts in developing a long-term U.S. strategy for moderate resolution land imaging satellites.

Jeffrey S. Amthor, Department of Energy
 Craig Baker, Department of Defense
 Glenn R. Bethel, Department of Agriculture
 Barron R. Bradford, Department of the Interior
 Raymond A. Byrnes, Department of the Interior
 Jack Clarke, Department of Defense
 Bryant Cramer, National Aeronautics and Space Administration
 John W. Cullen, Department of the Interior
 Bradley D. Doorn, Department of Agriculture
 Eve Douglas, Department of Commerce
 Fernando R. Echavarria, Department of State
 Martin Eckes, Department of the Interior
 Jay W. Feuquay, Department of the Interior, awarded posthumously
 Edward C. Grigsby, National Aeronautics and Space Administration
 Michael B. Hales, Department of Defense

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Theodore F. Hammer, National Aeronautics and Space Administration
James D. Hipple, Department of Agriculture
Riley D. Jay, Department of Defense
Douglas P. McGovern, Department of Defense
Rick Mueller, Department of Agriculture
Bruce K. Quirk, Department of the Interior
Colonel Patrick H. Rayermann, Department of Defense
D. Brent Smith, Department of Commerce
Kuppusamy Thirumalai, Department of Transportation
Charles Wooldridge, Department of Commerce

Jack Dangermond, for fully endowing the ESRI Award for Best Scientific Paper in GIS.

Dave Maune, for his diligent work as editor of the 2nd Edition of the DEM Manual.

Purpose: Established in 1991, The Outstanding Service Award is given to society members in recognition of outstanding and unusual efforts in helping ASPRS develop and carry out its program over a sustained period. Recipients have performed outstanding service at the chapter, regional, or national level. Awardees' service includes any activities, including professional, that have helped the society achieve its goals and objectives.

Donor: The ASPRS Foundation

The Outstanding Service Award consists of a bronze plaque

Recent Past Award Recipients:

2003

SAIC, Al Watkins, Aero-Metric Inc, Barney Schur, Mary Clawson, Sky Chamard

2004

Doug Fuller, The Potomac Region, The St. Louis Region, Susan Ustin, Jim Case

2005

Chris McGlone, Roy Mullen, Mike Renslow, Jan Gervin

2006

Dr. Stewart Walker, BAE Systems, Don Lauer

ASPRS Ford Bartlett Membership Award

2007 Recipients:

Brian Miyake
Thomas R. Mueller
Brian E. Murphy
Mary DeVries O'Neill

Purpose: First awarded in 1968, the ASPRS Ford Bartlett Membership Award honors members for actively promoting membership in ASPRS.

Donor: the ASPRS Foundation. (This award was originally sponsored by the firm of Lockwood, Kessler, and Bartlett, Inc.)

A member is eligible to receive the Award after sponsoring ten or more members in one year. Each recipient receives a hand-engrossed certificate and a one-year membership in the Society.

Recent Past Award Recipients:

2003, 2004

No award given

2005

Alan M. Mikuni
Daniel L. Civco

2006

Daniel L. Civco
Patricia G. Foschi
Brian Miyake
Thomas R. Mueller

ASPRS Outstanding Workshop Instructor Award

2007 Recipient: **Michael Renslow**

Michael Renslow, currently of Renslow Mapping Services, has been selected to receive the inaugural ASPRS Outstanding Workshop Instructor Award. Renslow is being presented this award in recognition of his significant contributions to the ASPRS workshops at the Spring and Fall meetings for many years. His workshops are always in great demand, relevant, and valuable. Renslow has been diligent in designing new workshops to keep pace with the ever-changing technologies in our field and is an excellent and engaging instructor.

The committee is pleased to make this award to Mr. Renslow and is looking forward to the many excellent workshops that he will continue to offer as part of the ASPRS Workshop Program.

Purpose: The Outstanding Workshop Instructor Award is conferred by ASPRS in recognition of special, personal, and meritorious contributions to continued organization, promotion, and/or delivery of workshops at the ASPRS Annual and Fall Conferences.

Donor: The award is administered by the ASPRS Foundation from funds donated by ASPRS members and participating sponsors through contributions to the ASPRS Foundation.

The award consists of a certificate and an inscribed laser pointer.

Col. Claude H. Birdseye President's Citation

2007 Recipient: **Kari J. Craun**

Purpose: The Col. Claude H. Birdseye President's Citation was established in 1965 as a tribute to one of the founders and the first president of the Society. Each year at the Annual Convention it is conferred on the outgoing president in recognition of her/his contributions to the Society.

Donor: The ASPRS Foundation

The Birdseye Citation carries with it a gold Past President's Key, an engraved plaque, and a hand-engrossed certificate.

Recent Past Award Recipients:

2003 – Terrence J. Keating

2004 - Donald T. Lauer

2005 - Russell G. Congalton

2006 – Karen L. Schuckman

George E. Brown, Jr. Congressional Honor Award

The award will not be given this year

Past Award Recipients:

2000 - Congressman George E. Brown, Jr. (D-Cal.) posthumously
 2001 - No award given
 2002 - Senator Trent Lott (R-Miss.)
 2003, 2004 - No award given
 2005 - Senator Wayne Allard (R-CO)
 2006 - No award given

ASPRS Fellow Award

2007 Recipients: **Russell G. Congalton, Alan M. Mikuni, Nancy K. Tubbs**

Russell G. Congalton

Russell G. Congalton is a professor of Remote Sensing and GIS in the Department of Natural Resources at the University of New Hampshire. Congalton received a BS (Natural Resource Management) from Rutgers University in 1979. He earned an MS (1981) and a PhD (1984) in remote sensing and forest biometrics from Virginia Tech. In his current position he is responsible for teaching courses in photogrammetry and photo interpretation, digital image processing, and geographic information systems. He conducts basic research involving spatial data uncertainty, accuracy assessment, and validation and applied research in using remotely sensed and other geospatial information to solve natural resource issues including forest management, wildlife habitat assessment, endangered species evaluation, change detection, and ecosystem analysis.

Congalton joined the faculty at the University of New Hampshire in 1991 as an assistant professor. He was promoted to associate professor in 1994 and to full professor in 1999. Prior to joining the faculty at UNH, he was an assistant professor of remote sensing at the University of California, Berkeley from 1985 – 1991. From 1991-1993, he held a Visiting Remote Sensing Scientist position with the U.S. EPA Environmental Sciences Lab in Las Vegas, Nevada. Other significant remote sensing experience includes a post-doctorate research scientist position at the U.S. Army Corps of Engineers Waterways Experiment Station for all of 1984, an internship at the USGS EROS Data Center in 1981, and membership on the SPOT Image Academic Advisory Council from 1994 - 2000. In addition, Congalton has served as Chief Scientist of Pacific Meridian Resources from 1989 - 2000, with Space Imaging Solutions from 2000- 2004, and with the Sanborn Map Company from 2004 until the present.

He has been an active member of ASPRS since 1979, and has been awarded four ASPRS Presidential Citations (1987, 1989, 1990, 1992) and an ASPRS Outstanding Service Award (2000). Since 1997, Congalton has been the National Workshop Coordinator responsible for organizing and overseeing all Educational Workshops at APSRS spring and fall conferences. In addition, he served as President of ASPRS in 2004-05 and was the ASPRS delegate to the ISPRS Congress in Istanbul in 2004. He was the primary force behind rejuvenating the New England Region of ASPRS and has served as Region Secretary/Treasurer since 2004.

Congalton has authored or coauthored more than 100 papers and conference proceedings. He is the author of five book chapters, co-editor of a book on spatial uncertainty in natural resource databases entitled *Quantifying Spatial Uncertainty in Natural Resources: Theory and Applications for GIS and Remote Sensing*, and co-author of the book *Assessing the Accuracy of Remotely Sensed Data: Principles and Practices*. His papers have won awards four times including: 1994 ASPRS John I. Davidson Award for Practical Papers (2nd Prize), 1996 ESRI Award for Best Scientific Paper in Geographic Information Systems (3rd Prize), 1998 ASPRS John I. Davidson Award for Practical Papers (1st Prize), 1998 ESRI Award for Best Scientific Paper in Geographic Information Systems (2nd Prize).

Finally, Congalton is the Remote Sensing/Land Cover Principal Investigator of the NSF GLOBE Program, a scientist-teacher-student environmental education and research partnership involving over 90 countries and 15,000 schools. Much of the work in this project is developing scientific protocols and learning activities for student understanding of land cover mapping and remote sensing. He has been part of the GLOBE Program since 1995.

Alan M. Mikuni

Alan Mikuni received his BS in civil engineering from California State University at Fresno (then called Fresno State College) in 1970 and became licensed as a professional engineer in California in 1975.

Mikuni began his career at the USGS as a civil engineering student trainee in 1966, working summers engaged in field survey and photogrammetric mapping operations. On graduation in 1970, he entered duty as a civil engineer at the USGS engaged in all phases of topographic mapping. In 1995, he was selected as Chief of the Western Mapping Center in Menlo Park, California. In 2001, he was appointed to his current position within the U.S. Federal Government's Senior Executive Service in the position of Western Regional Geographer. As such, Mikuni is responsible for the implementation of all aspects of the mission of the USGS' Geography Discipline in the Region. He provides executive leadership on critical national USGS programs, management of Regional geographic science, and along with fellow Regional executives ensures the execution of all USGS programs in the Region.

Mikuni was the project manager on the first USGS implementation of the Brooks Act AE Selection Process on the National Digital Orthophoto Quadrangle Program. He served as the project manager on this program for the first three USGS contracts. He established an innovative program to provide non-monetary rewards to USGS employees. In 1999, his efforts led to the establishment of the USGS Science Impact program which uses geography to demonstrate the value of natural science in public decision-making. Mikuni continues to work to expand Science Impact through the establishment of external partnerships with the Center for Science Policy, universities, scientists, and public decision-makers. Mikuni's distinguished career within the USGS has led to his elevation to the highest levels of management within the organization as a Senior Executive.

Mikuni has been an active, contributing member of ASPRS since 1968 and was ASPRS National President during 2000-2001. He served as conference co-chair for the 2006 Annual ASPRS Conference in Reno, Nevada. He currently serves as co-chair on the Convention Planning and Policy Committee and as a member of both the Certification Committee and the Professional Conduct Committee. His responsibilities on the Certification Committee include review of the Certified Photogrammetrist applications. In addition, he serves as chair of the Kenneth Osborn Scholarship Committee. He also served as the Northern California Region President and Director of the ASPRS Professional Practice Division.

Mikuni is a Fellow of the American Congress on Surveying and Mapping and a Fellow of the American Society of Civil Engineers. He is currently nominated and running unopposed for the position of Vice President of the Cartography and Geographic Information Society of the American Congress on Surveying and Mapping, a position which will automatically progress to the position of President in 2008. His participation in the geospatial community also extends to membership in the Urban and Regional Information Systems Association, the National Society of Professional Engineers, the Association of American Geographers, and the Senior Executives Association. He currently serves on the Geomatics Engineering Advisory Council for California State University at Fresno. In 1996, the Department of the Interior recognized Mikuni with its highest honor award, the Distinguished Service Award, for career contributions to the Department. In addition to his involvement in professional society activities, Mikuni serves as the President of the Fremont, California Chapter of the Japanese American Citizens League. In this role, he has

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made significant contributions to the promotion and support of Japanese Americans in professional development.

Nancy K. Tubbs

Nancy Tubbs attended the University of Minnesota and graduated from Chaminade University in Honolulu, Hawaii, in 1978 with a Bachelor of General Studies (History and Geography). She received a master's degree in Environmental Policy and Management, with a concentration in Natural Resource Management, from the University of Denver in November 2000. She began her career in 1978 working for the U.S. Army Corps of Engineers, Merrick and Co. Engineering, and Bureau of Land Management's Colorado State Office in Denver until 1984. She transferred to the U.S. Geological Survey's Rocky Mountain Mapping Center in Denver where she participated on all mapping production activities and was selected for several specialized technical and managerial training. In June 1991, she returned to the BLM National Applied Resource Sciences Center in Denver as a cartographer where she served as the lead editor for the Bureau's 1:100,000-scale mapping program. While at BLM she participated in the Office of Personnel Management's Women's Executive Leadership Program.

In January of 1997, Tubbs transferred back to the USGS, as their Western Region State Liaison for Oregon, located in Portland, Oregon. In this respect, she is responsible for developing partnerships with other federal, state and local agencies as well as universities, NGOs, and industry supporting mutual beneficial mission goals. As such, she represents the USGS in coordinating National Mapping activities with other USGS disciplines in the Pacific Northwest (PNW); with federal, state, regional, and local agencies in the region; and with academic and private sector entities in Oregon and Washington. She is actively involved in the implementation of The National Map in the PNW and USGS' Homeland Security coordination related to the 133 Urban Areas program in the PNW. She also represents the USGS on the Oregon Geographic Information Council and on the regional Inter-organizational Resource Information Coordinating Council. She is an active member of several state framework subcommittees in Oregon and Washington as well as at the regional level.

Tubbs is a past National Director, President, Vice President, and Newsletter Editor for the Rocky Mountain Region. She co chaired the first GIS in the Rockies Conference in 1989, and also served on the planning committee for the 1990 conference. More recently she served as the Scholarship Committee Chair, Secretary/Treasurer, Vice President, and President for the Columbia River Region. She was actively involved with the planning for the ASPRS/URISA regional GIS in Action Conference in Portland from 1999-2001.

At the national level she served as the Assistant Convention Director for the 1990 ASPRS Annual Conference in Denver and received an ASPRS Presidential Citation. She represented ASPRS on the joint GIS/LIS Steering Committee for 1995-1997, and served as the GIS/LIS Chair for 1997 in Cincinnati. Tubbs also served as the ASPRS GIS Division Director during 1999-2000, and as GIS Assistant Division Director from 1997-1998. She has served on several other ASPRS National Committees, including: Convention Policy and Planning, Strategic Planning, Membership, Professional Conduct, and Education. She and Chris Fayed co-chaired the Technical Program for the ASPRS Annual Conference in Portland in 1999.

Purpose: Started in 1992, the designation of Fellow is conferred on Society members who have been active for a total of at least ten years and who have performed exceptional service in advancing the science and use of the mapping sciences and related disciplines. It is awarded for professional excellence and for service to the Society.

Donor: The ASPRS Foundation

The ASPRS Fellow Award includes a hand-engrossed certificate.

Recent Past Award Recipients:

2003

Daniel L. Civco

David F. Maune

2004

Amelia Marie Budge

Clive Fraser

Paul F. Hopkins

Elias Johnson

2005

Lawrence Pettinger

2006

Anthony B. Follette

Barry N. Haack

Lloyd O. Herd

Photogrammetric Award (Fairchild)

2007 Recipient: **Dr. George Y.G. Lee**

George G. Y. Lee received his BS (Mathematics and Statistics), MS (Photogrammetry and Surveying), and PhD (Photogrammetry) from the University of California, Berkeley in 1972, 1973, and 1994 respectively. He started his career at the USGS in 1972 conducting, among other things, QC on products from the original orthophotoscopes.

Lee has an extremely broad knowledge of current geospatial technologies, digital sensor systems, and methods for acquiring all types of geospatial data; experience in systems and techniques development; development of data standards and quality assurance programs; the application of remote sensing and geographic information systems; and development of calibration, validation, and verification procedures for sensor systems. Over the course of his thirty two plus years, Lee managed research groups conducting investigation and development activities in modern geospatial technologies, digital photogrammetry, digital sensor systems, digital orthophoto products and procedures, image processing techniques, database methods, GIS applications, and standards development.

For at least the last 11 years, Lee has managed the USGS orthophoto programs. He is considered the founder of the USGS Digital Ortho Program and managed the program that resulted in the acquisition of nationwide coverage of 1 m orthoimagery for the conterminous United States. He had oversight of this program from primary data acquisition through processing, archive, and distribution. He has also been a key participant in the National Digital Ortho Program (NDOP), a multi-agency consortium that plans for the acquisition of nationwide orthoimagery. In the course of this activity he established Federal Architect and Engineering contracts to produce digital orthophoto products and services for the National Mapping Program including standards and specifications development, bidder site inspections, evaluation, and selection, as well as establishing quality control procedures, and over all performance monitoring. He was also the USGS technical lead on a cooperative research project with Microsoft's Research Group Corporation that resulted in the TerraServer technology to serve imagery data over the Internet.

Most recently, Lee has been an instrumental force in the development of remote sensing instrument and product validation and certification standards for the USGS, the nation and potentially the world. His work has contributed directly to USGS initiatives supporting analog and digital mapping sectors of the remote sensing and mapping industry. Further, his contributions to development of standards of practice for evaluating and certifying remote sensing imagery products will contribute

extensively to satisfying the photogrammetric requirements of Government agencies and programs.

Lee is a Certified Photogrammetrist (ASPRS). He was also awarded both the Department of the Interior's Superior Service and Meritorious Service Awards.

Purpose: This award was established in 1943 to stimulate the development of the art of aerial photogrammetry in the United States.

The Award consists of a silver presentation plaque mounted on a walnut wood panel.

Practicability is the essence of the Award and with this as a criterion, the merits of candidates are considered by the Committee with respect to the following points:

- An outstanding invention or design involving any type of equipment that applies to the art of aerial photogrammetry.
- Any outstanding method developed for the use of aerial photographs and/or imagery. This does not relate only to the use of photographs for mapping but is intended in a general sense.
- Outstanding research for study along aerial photogrammetric lines.
- Outstanding effort for the general advancement of the art of photogrammetry.

Donor: Lockheed Martin

Recent Past Award Recipients:

- 2003 - Paul R. Wolf
- 2004 - J. Chris McGlone
- 2005 -Prof. Dr.-Ing. Wolfgang Förstner
- 2006 – Gordon Petrie

ASPRS Conference Management Awards

2007 Recipients: Gary Florence and Bon Dewitt

Purpose: The intent of this award is to recognize the great effort put forth by the individuals who volunteer their time to assist in the planning and execution of a successful annual conference.

Donor: The ASPRS Foundation

The award is an engraved plaque with the conference program cover.

Recent Past Award Recipients:

- 2003
Don Davis, Jr., Thomas Eidel, Greg Durocher
- 2004
Allen Cook, Roger Hoffer, Jeff Liedtke
- 2005
Richard Campbell, David Maune, Barry Haack
- 2006
George F. Hepner, Alan M. Mikuni, Patricia G. Foschi, Robert. D. Ramsey

Presidential Citations

2007 Recipients: **Mary Clinthorne, Perry Hardin, Dr. Rakesh Malhotra, Dr. Albert Barnett, Paul Brooks, and Randy Olsen**

Mary Clinthorne for her service as book review editor for PE&RS.

Perry Hardin for his service as Chair of the Publications Committee and Highlights editor for PE&RS.

Rakesh Malhotra, an instructor in the Department of Environmental, Earth, and Geospatial Sciences of North Carolina Central University for providing the initial communication with ASPRS that led to the development of the ASPRS Provisional Certification Program. He has encouraged several students to pursue certification and become ASPRS members.

Albert Barnett, the Chair of the Department of Environmental, Earth, and Geospatial Sciences of North Carolina Central University, for providing strong support for the ASPRS Provisional Certification Program within the University by coordination with the Dean's Office, the Accreditation Department, and the Faculty.

Paul Brooks for his work as Program Chair for the ASPRS San Antonio Fall Conference.

Randy Olsen for his long-standing work as Chair of the Robert E. Altenhofen Memorial Scholarship review Committee.

Purpose: First awarded in 1992, Presidential Citations are presented by the ASPRS President to members of ASPRS and other societies, family members, and friends in recognition of special, personal, and meritorious contributions to the operation or advancement of the Society and its interests during the presidential year.

Donor: the ASPRS Foundation

The Presidential Citation is a hand-engrossed certificate.

Recent Past Award Recipients:

- 2003
James Sturdevant, Thomas Palmerlee, Stanley Morain, Charles Mondello, Wayne Valentine, Ann MacLean, Julie Keating, Mike Renslow, Martin Flood, Amy Budge
- 2004
George Hepner, Charles Mondello, Ray Williamson, Rae Kelley, Carol Lauer, Mike Renslow
- 2005
Dan Civco, Marguerite Madden, Don Lauer, Scott Perkins, Pat Woodruff, Cindy Clark, Steve DeGoria, Larry Pettinger, Barry Haack, Sokhan Hing, Kass Green, Doug Richardson, Richard Tilley, Kim Tilley, The Congalton Family
- 2006
A. Stewart Walker, Richard Aspinall, Stephen Yool, Eric Andeline, James Morrell, Peter Boniface, Duane Haselfeld, Ding Yuan, Lee Harbers, Bradish Johnson, Jim Hipple, Michael Thomas

ASPRS Region of the Year Award

2007 Recipients:
 First Place: **The Columbia River Region**
 First Honorable Mention: Tie: **The Eastern Great Lakes and The Rocky Mountain Regions**
 Second Honorable Mention: Tie: **The Central New York and Central Regions**

First Place:
The Columbia River Region did an outstanding job this year. Congratulations for taking to the top position. The Region received this award for outstanding accomplishments in all areas of region activities, some of which include a terrific newsletter; holding numerous technical meetings/presentations; establishing a new student chapter; granting student chapter awards, and having a productive membership recruitment and retention program.

Awards Program

Tied for First Honorable Mention:

The Eastern Great Lakes has won this award for their dedication to membership promotion and retention (with several membership champions); having a scholarship award; giving donations to the ASPRS Foundation; having successful technical meetings/workshops (including Wetland Remote Sensing and Mapping).

The Rocky Mountain Region has received this award for their successful student membership recruitment program; membership renewal campaigns; having two new student chapters; holding a major technical conference "GIS in the Rockies" with URISA, ACSM, PLSC, GITA and GIS Colorado.

Tied for Second Honorable Mention:

The Central New York Region won this award once again for their involvement with headquarters in working with the Conference Policy and Planning Committee on the Fall 2007 Conference in Ottawa, Ontario; providing ongoing support for the 10 year industry forecast; having a student of the year award; consistently contacting their inactive members and ascertaining the reasons for delinquency; and having a successful 5th Annual Remote Sensing Symposium.

The Central Region has received this award for continuous dedication to their members as well as the Society; creating a prototype e-ballot, currently under review for additional development; their scholarship program; Student Chapters and Student members travel fund; education, Public relations and overall efforts to be an outstanding region.

The Region of the Year Award includes a hand engrossed certificate and possession of the Region of the Year banner for one year for the winner, and certificates for first and second honorable mention.

Purpose: The Region of the Year Award was established in 1968 to recognize excellence at the regional level in providing service to the members and to the profession at large.

Donor: The ASPRS Foundation

The Region of the Year Award includes a hand engrossed certificate and possession of the Region of the Year banner for one year for the winner, and certificates for first and second honorable mention.

Recent Past Award Recipients:

2003

Rocky Mountain Region
Central New York Region
Central Region

2004

Rocky Mountain Region
Columbia River Region
Central Region

2005

Rocky Mountain Region
Central Region
Central NY and Columbia River Regions

2006

The Rocky Mountain Region
The Central US and Columbia River Regions
The Central New York and Eastern Great Lakes Regions

ASPRS Region Newsletter of the Year Award

2007 Recipients:

First Place: **Wavelengths Columbia River Region**

Second Place: **The Central Region Newsletter**

Third Place: **Rocky Mountain Compiler**

Wavelengths, the newsletter of the Columbia River Region is the First Place Winner of the Newsletter of the Year. Its diligence brought it from third place in 2004 and 2005. This outstanding publication is well known for its insights, timely topics and other important contributions to its readers with its informative reporting, and keeping members abreast of upcoming events including region and national news. Its concise editing and style makes it easy to read.

The Central Region Newsletter is the Second Place Winner of the Newsletter of the Year Award. The colorful photojournalistic style of this publication covers all important areas in the region such as meetings, job postings, scholarships, professional certifications (including the provisional certification Program), welcoming new members and other information valuable to readers.

The Rocky Mountain Compiler is the third Place Winner of this award. This attractive publication contains many important concerns of the region as well as for National, such as meetings, calendar events, awards and scholarships. Spotlighting Student Chapters, new members, Student Volunteers for the Fall MAPPs-ASPRS Specialty conference, and job posting all add to a publication that reflects the Region's dedication to its chapters and members.

Purpose: The Society first bestowed this award in 1980 to recognize excellence of the Region in providing service to the members and to the profession at large through publications of a newsletter.

Donor: The ASPRS Foundation

The Newsletter of the Year Award includes a hand engrossed certificate.

Recent Past Award Recipients:

2003

Rocky Mountain Compiler
Central New York Region Newsletter
Central Region Newsletter

2004

Rocky Mountain Compiler
Central Region Newsletter
Wavelengths (Columbia River Region)

2005

Rocky Mountain Compiler
Central Region Newsletter
Wavelengths

2006

The Central Region Newsletter
Rocky Mountain Compiler
Wavelengths

Region Website of the Year

2007 Recipients:

First Place: **Eastern Great Lakes Region**

Second Place: **Rocky Mountain Region**

Third Place: **Alaska Region**

A scoring and weighting system applied by a third party neutral judge is used to decide the winners of the Region Website of the Year Award.

The winning websites demonstrate high quality look and feel in the site design and effectively convey accurate, informative and timely content. Each site is easy to navigate with few or no broken links and page file sizes are minimized to reduce page loading times. The sites display content of unique regional flavor.

Purpose: The Region Website of the Year Award serves to recognize excellence among the regions in providing service to members and to the profession at large through web site publication.

Donor: The ASPRS Foundation

The Region Website of the Year Award, inaugurated in 2003, includes hand-engrossed certificates for all winners.

Recent Past Award Recipients:

2003

First Place: Rocky Mountain Region

First Honorable Mention: Central New York Region

Second Honorable Mention: Central Region

2004

First Place: Saint Louis Region

Second Place: Potomac Region

Third Place: Rocky Mountain Region

2005

First Place: Central Region

Second Place: Central New York

Third Place: St Louis Region

2006

First place: Potomac Region <http://www.asprspotomac.org/>

Second place: tie - Mid-South Region <http://www.rac.louisiana.edu/msasprs/>

and St. Louis Region <http://www.asprs.org/st-louis/>

ASPRS Travel Grant

2007 Recipients: **Jonathan B. Thayn and Bandana Kar**

Jonathan B. Thayn is pursuing a doctoral degree in geography at the University of Kansas under the co-advisement of Dr. Kevin P. Price and Dr. William I. Woods. His research interests include using vegetation seasonal dynamics and phenology, as expressed in hyper-temporal remotely sensed datasets, to characterize wilderness and agriculture land cover in order to improve models of ecosystem behavior.

His dissertation is entitled "Locating Amazonian Dark Earths (ADE) using MODIS Hyper-Temporal Datasets and Harmonic Wave Analysis," and looks to identify fertile anthropogenic soils in the Amazon Basin based on the patterns and dynamics of the vegetation growing on them verses those of vegetation growing on the typical nutrient-poor oxisols that dominate the region.

In addition to allowing Thayn to more fully fulfill his responsibilities as Communications Councilor of the ASPRS Student Advisory Council, he has stated that, "attending the ASPRS Annual Conference will allow me to stay on the cutting edge of research and technique development in my chosen field. This exposure is instrumental in helping me achieve my professional goals."

Bandana Kar is a doctoral candidate at the University of South Carolina pursuing a degree in Geography with a specialization in Geographic Information Science. Ms. Kar will be presenting a paper entitled "Impact of scale of analysis on property loss estimation in Florida: A comparative approach." The research concentrates on establishing a statistical relationship between the spatial scales of analysis used to estimate property damage loss due to hurricane induced storm surge impacts and estimated loss.

By establishing a relationship between spatial scale and potential loss from storm surge, her research will contribute to the field of geography in general and the sub-discipline of Geographic Information Science and Hazards. The results of this research will facilitate organizations to down-scale or upscale financial loss estimation due to change in the observation scale. By presenting the outcome of this work to researchers and policy makers, Kar hopes to receive constructive insights and suggestions towards further research in the policy arena.

Purpose: the intent of this program is to increase student exposure to the respective professions identified with ASPRS, and to encourage continued student identification with and membership in a national professional organization.

Donor: The ASPRS Foundation.

The award consists of two grants of up to \$500 each to two qualifying students in support of airfare and lodging to attend the annual Conference. The grant also includes a one-year student membership in ASPRS and a complimentary conference registration provided the selected students volunteer to help at the conference.

Recent Past Award Recipients:

2003 – Thomas Kirk and Rebecca Forest Musy

2004 – Steven Lennartz and Michele Baum

2005 – Xin Miao

2006 – Hongwei Zhu and Alicia Marie Rutledge

Don't forget to apply for the following awards by

December 1, 2007

and take advantage of these valuable scholarships.

Forms may be obtained from the ASPRS office or

they may be downloaded from our website at www.asprs.org.

BAE Systems Award

William A. Fischer Memorial Scholarship

Robert E. Altenhofen Memorial Scholarship

Ta Liang Memorial Award

Robert N. Colwell Memorial Fellowship Award

Paul R. Wolf Memorial Scholarship

Kenneth J. Osborn Memorial Scholarship

The ASPRS GeoEye Award

Leica Geosystems Internship

Intergraph Scholarship

Kodak International Educational Literature Award

ASPRS Student Travel Grants

Session Categories

Session numbers are noted to the left of each title

Data Fusion and Data Mining

- 6. Data Fusion - Automation
- 17. Data Fusion - Imagery and Lidar
- 40. Data Fusion I
- 62. Data Fusion II
- 83. Special Session: Beyond Depth – Emerging Techniques in Active/Passive Data Fusion – and – Anticipated New Bathymetric Systems

Data Processing and Analysis

- 5. Change Detection
- 16. Classification I
- 20. Feature Extraction
- 76. Noise/Clutter/Cloud Removal

Data Processing and Analysis Techniques Utilizing Remotely-sensed and Other GIS Data

- 5. Change Detection
- 16. Classification I
- 20. Feature Extraction
- 22. Image Analysis Using Geometric Constraints
- 30. Classification II
- 41. Data Smoothing and Filtering
- 48. Special Session: Imagery and Geospatial Data in Disaster Response - 1
- 52. Natural Catastrophe Assessment
- 56. Remote Sensing and GIS Techniques
- 59. Special Session: Imagery and Geospatial Data in Disaster Response - 2
- 68. Lidar/SAR — Application Processing Methods
- 76. Noise/Clutter/Cloud Removal
- 88. Object Detection and Classification

Data Standards, Management and Policies

- 15. Special Session: Training Session on USGS Imagery Specifications
- 19. EPA: Geospatial Quality Assurance
- 34. Web Services and Data Storage
- 60. Special Session: Re-engineering the National Spatial Data Infrastructure (NSDI); North American Metadata Profile, Geospatial Line of Business

Digital Elevation Model Technologies and Applications

- 7. DEM — Accuracy Assessment I
- 42. DEM — Accuracy Assessment II
- 51. Lidar — Forestry and Habitat
- 64. DEM — Coastal and Bathymetric Applications
- 68. Lidar/SAR — Application Processing Methods
- 71. Special Session: Applications of Bathymetric and Topographic Lidar to Surveying and Mapping Problems in the Littoral Zone
- 73. DEM — Digital Processing Methods
- 85. DEM — Geology and Change Detection
- 93. DEM — Quality Control

Educational Programs and Issues

- 9. Education - College and University Geospatial Curricula
- 36. Geospatial Education, Materials and Facilities
- 54. Pre-College Education Issues
- 55. Project Management and Education Curriculum Issue

GIS System Integration, Modeling, Geostatistics, Intelligent Databases, Temporal Studies, and Other Analysis Techniques

- 31. GIS - Modelling and Analysis
- 32. GIS - Urban Analysis Methods
- 44. GIS Analysis in Water Resource Areas
- 56. Remote Sensing and GIS Techniques
- 94. GIS — Analysis and Processing Methods

Photogrammetry, Surveying, and Mapping Issues and Techniques

- 4. Calibration Issues in Photogrammetry
- 8. Digital Photogrammetric Cameras and Photogrammetric Analysis using Video Sensors
- 26. Special Session: Airborne GNSS for Photogrammetry
- 33. High Resolution Satellite Imagery and 3D Surface Models
- 38. Classification and Positional Accuracy Assessment
- 39. Close Range Photogrammetry
- 43. Geometric Processing of Satellite Imagery
- 50. Hyperspectral Scanners and Photogrammetry in GIS
- 53. Photogrammetric Digital Camera Accuracy
- 58. Special Session: Direct Georeferencing
- 67. Integration of Photogrammetry and Lidar
- 74. Image Sensor Calibration
- 77. Photogrammetric Processing Methods
- 78. Photogrammetric Production Tools and Techniques

Remote Sensing and GIS technologies

- 3. Agricultural Applications
- 11. Feature Extraction Techniques
- 12. Special Session: Geospatial Solutions at the FWC Fish and Wildlife Research Institute
- 21. GPS/INS - Navigation and Processing
- 23. Wildlife Habitat Analysis
- 27. Applications of Lidar to Forestry
- 28. Aquatic Vegetation Mapping
- 29. ASTER Satellite Applications
- 37. Classification Algorithm Development
- 38. Classification and Positional Accuracy Assessment
- 45. Hurricane Damage Assessment
- 46. Special Session: Wetland Mapping/Assessment with Thermal Sensors
- 49. Special Session: Mapping the Great Wall of China
- 57. Vegetation Mapping: Change Detection
- 61. Classification Techniques
- 63. Data Fusion Techniques
- 65. Forestry Mapping
- 66. Hydrological Applications
- 69. MODIS Satellite Mapper
- 72. Coastal Mapping
- 75. Land Use/Land Cover Change Assessment
- 80. Soil and Hydrology Mapping
- 81. Special Session: Applications of Aerial Thermography
- 84. Cultural Feature Applications
- 86. Landsat Mapping Applications
- 87. Landscape and Image Scale Issues
- 89. Social and Environmental Mapping Issues
- 90. Transportation Mapping
- 91. Urban Mapping
- 92. Vegetation Mapping: Classification
- 95. Landscape Pattern Assessment
- 96. Vegetation Mapping: Indices
- 97. Vegetation Mapping: Invasive Plants
- 98. Water Resource Mapping
- 99. Wildfire Mapping

My Day-at-a-Glance

Sunday, May 6th

Time	Event	Room	Attending
7:30 am to 8:00 am	Executive Committee Breakfast	Café Waterside	
8:00 am to 5:00 pm	Executive Committee Meeting	Room 3	
4:00 pm to 7:00 pm	Registration	Second Floor	

Monday, May 7th

Time	Event	Room	Attending
6:30 am to 5:00 pm	Registration	Second Floor	
8:00 am to 5:00 pm	Workshop 1 — Professional Airborne Digital Mapping Systems – An Overview	Room 12	
8:00 am to 5:00 pm	Workshop 3 — Advanced Topics in Orthophoto Production	Room 8	
8:00 am to 12 noon	Workshop 4 — Telegeoinformatics: An Introduction to Mobile Mapping	Room 10	
1:00 pm to 5:00 pm	Workshop 5 — Putting It All Together: Integrating Imagery to Derive Information for Decision-making	Room 10	
8:00 am to 12 noon	Workshop 6 — Making SAR Accessible	Room 11	
8:00 am to 12 noon	Workshop 8 — Digital Terrain Models – Algorithms and Mathematical Procedures	Room 13	
1:00 pm to 5:00 pm	Workshop 9 — Thermal Remote Sensing	Room 13	
9:00 am to 10:00 am	ASPRS Committee Meetings — Committee Chairs	Room 1	
9:00 am to 10:00 am	ASPRS Committee Meetings — Division Directors	Room 2	
10:00 am to 12 noon	ASPRS Committee Meetings — Awards Committee	Room 1	
10:00 am to 12 noon	ASPRS Committee Meetings — Electronic Communications Committee	Room 2	
10:00 am to 12 noon	ASPRS Committee Meetings — Evaluation for Certification Committee	Room 1	
10:00 am to 12 noon	ASPRS Committee Meetings — New Board Orientation	Greco Ballroom	
1:00 pm to 3:00 pm	ASPRS Committee Meetings — Region Officers	Room 2	
1:00 pm to 3:00 pm	ASPRS Committee Meetings — Education and Professional Development Committee	Room 9	
3:00 pm to 5:00 pm	ASPRS Committee Meetings — Convention Policy and Planning Committee	Room 1	
3:00 pm to 5:00 pm	ASPRS Committee Meetings — Professional Practice Division (PPD)	Room 9	
8:00 am to 12 noon	User Group — BAE Systems	Room 5	
8:00 am to 12 noon	User Group — E. Coyote Enterprises/JenaOptronics, ECE, Inc.	Room 7	
8:00 am to 12 noon	User Group — OPTECH	Room 6	
1:00 pm to 5:00 pm	User Group — DIMAC Systems – VX Services	Room 6	
1:00 pm to 5:00 pm	User Group — Merrick	Room 7	
1:00 pm to 5:00 pm	User Group — Microsoft/Vexcel Corporation	Room 5	

Sunday, May 6th

Executive Committee Breakfast

Café Waterside
7:30 am to 8:00 am

Executive Committee Meeting

Room 3
8:00 am to 5:00 pm

Registration Desk

4:00 pm to 7:00 pm

Workshops

Workshop 1

Professional Airborne Digital Mapping Systems – An Overview

Dave Fuhr, *Airborne Data Systems*

Brian Huberty, *U.S. Fish & Wildlife Service*

8:00 am to 5:00 pm, CEU .8

Room 12

INTRODUCTORY Workshop: The primary objective of this tutorial is to review professional airborne digital mapping camera systems. We will discuss all advantages and disadvantages of these new, dynamic systems - technical, costs, feasibility, calibration and applications. Participants will leave with a better understanding of what it takes to map their projects by either contracting or acquiring airborne digital mapping camera systems.

Workshop 3

Advanced Topics in Orthophoto Production

Frank L. Scarpace, Emeritus Professor, *University of Wisconsin-Madison*

Matt Steven, *AeroSys Consulting*

8:00 am to 5:00 pm, CEU .8

Room 8

ADVANCED Workshop: In order to maximize the benefits of this course, participants should have previous experience with creating orthophotos from aerial or satellite imagery.

This course concentrates on two critical aspects of orthophoto production – automatic generation of pass/tie points and the production of orthophoto mosaics. Aerotriangulation will be reviewed and the principles used for automatic matching of conjugate points will be discussed. Many aspects of creating and correcting orthophoto mosaics will be highlighted. Example data sets will be provided for participants to gain experience in automated aerial triangulation and creating orthophoto mosaics during the afternoon.

Workshop Participants are asked to bring their own laptop computer to the workshop. Any laptop running Windows 2000 or XP is acceptable. Minimum of memory of 256Megs, at least 2 Gigs of free space on hard disk.

Workshop 4

Telegeoinformatics: An Introduction to Mobile Mapping

Robert Burtch, *Ferris State University*

8:00 am to 12:00 noon, CEU .4

Room 10

INTRODUCTORY Workshop: The purpose of this workshop is to introduce the participants to the principles of mobile mapping and mobile computing.

Location-based services are growing in importance and the concept of telegeoinformatics will be defined and the components and applications will be described. The first part of the workshop will describe mobile mapping systems, configurations, and processing. This will involve the integration of data collection tools such as GPS, inertial measurement, digital cameras, laser scanners, and other spatial data collection devices. The workshop will not discuss the theory of these particular systems but will stress the interrelationships. Some basic introduction of the technology will be presented. The advantages and disadvantages will be talked about as well as limitations to the technology. The second part of the workshop will discuss mobile computing systems. The technology will be presented to show the participant how specific hardware systems can be used in the field. Tradeoffs in the computing systems will be discussed. Wireless technologies will be introduced and explained. Finally, the workshop will show the advantages of placing computing assets in the field and how an organization can exploit these technologies in updating and maintaining their data resources.

Workshop 5

Putting It All Together: Integrating Imagery to Derive Information for Decision-making

Russell G. Congalton, *University of New Hampshire*

Andrew Brenner, *Sanborn*

1:00 pm to 5:00 pm, CEU .4

Room 10

INTRODUCTORY Workshop: This workshop is designed for the user who has some remote sensing and spatial data analysis experience but wishes to gain a broader understanding of what is currently available and how to determine which imagery to use for her/his specific needs.

There is an ever-increasing plethora of remotely sensed imagery available for use in spatial data analysis. New satellites with increasing spatial and/or spectral resolution are becoming commonplace. Airborne sensors and digital cameras offer many great opportunities. Advances in lidar and radar make these instruments viable tools today. Choices and confusion abound. This workshop is designed for those who wish to learn more about and appreciate the usefulness of this myriad of remotely sensed systems. It is for those who want to “put it all together” and see which systems or combination of systems provides the answer for their problems. The workshop begins with a presentation of the basic properties of all these remote sensing systems. Once the basics are well understood, several important factors must be considered when integrating the imagery to derive information. These factors include geometric registration, image mosaicing, radiometric correction, and quality control/accuracy assessment. Case studies and application examples will be used to demonstrate the utility (pros and cons) of each image type and to highlight situations where great synergy exists between multiple image sources. Every participant will leave this workshop with a greater appreciation of how to match their spatial analysis needs to the current wealth of remotely sensed imagery.

Continuing Education Units (CEUs) for Workshop Attendees

ASPRS, in conjunction with the University of Maryland, College Park, is pleased to offer ASPRS 2007 Annual Conference workshop attendees the opportunity to earn Continuing Education Credits (CEUs). All attendees are eligible for CEUs if they attend any of the workshops, register on site for CEUs, and pay the processing fee of \$25. For each workshop attended, one CEU for every 10 hours of eligible sessions attended is awarded to CEU registrants. (Full day workshops are eight (8) hours and receive 0.8 CEUs. Half day workshops are four (4) hours and receive 0.4 CEUs). Registration forms will be distributed during the workshops. Forms and payment are accepted on site only at the Conference Registration Desk.

CEU participants will receive a certificate of completion awarded by the University of Maryland, College Park, approximately one month after the conference. If certificate is not received within 60 days after the conference, please contact ASPRS.

Please note: CEU's are awarded to Workshop attendees only. Technical Sessions, General Sessions, Poster Sessions, or any other scheduled special event at this conference are not eligible for CEUs.

Workshop registration fees are NOT included in the full Conference registration fee. Workshops require separate registration and payment for each workshop. Availability is based on space. Workshops are limited to a maximum of 40 attendees.

Workshop 6

Making SAR Accessible

Don Atwood, *Alaska Satellite Facility*

Rudiger Gens, *Alaska Satellite Facility*

8:00 am to 12:00 noon, CEU .4

Room 11

INTRODUCTORY Workshop: This half-day workshop will introduce Remote Sensing professionals to Synthetic Aperture Radar (SAR). At the conclusion of the course, the student will understand the fundamentals of SAR as well as how SAR data is acquired, processed, and used in a wide variety of scientific applications.

Historically, SAR data has been used by a small group of experts, with specialized knowledge and processing tools. However, as more commercial sensors become available, there is an increasing demand to use SAR as a complementary data source for remote sensing and GIS applications. This workshop will enable the student to process SAR data into terrain-corrected, geocoded images that can be combined with other kinds of sensor data. The fundamental concepts introduced will be reinforced through practical demonstrations and exercises. Lastly, the students will learn how data can be acquired in support of their own research projects.

Workshop 8

Digital Terrain Models – Algorithms and Mathematical Procedures

Yaron A. Felus, *Ferris State University*

8:00 am to 12:00 noon, CEU .4

Room 13

INTERMEDIATE Workshop: In order to maximize the benefits of this workshop, participants should have an understanding of fundamental GIS principles. Moreover, basic knowledge of math, statistics and geometry is strongly suggested.

The primary objective of this workshop is to present algorithms and techniques to create, analyze, and utilize Digital Terrain Models (DTM). Basic spatial data structures such as Delaunay triangulation, Voronoi diagram, and Quadtrees will be described. Mathematical procedures for interpolation such as linear, trend estimation, inverse distance and kriging, will be studied using numerical examples. Finally, advanced methods for DTM visualization, analysis and integration such as contouring, 3D scene creation, drainage network, viewshed and watershed delineation, and co-kriging will be presented.

Workshop 9

Thermal Remote Sensing

Charles Olson, Professor Emeritus, *University of Michigan*

1:00 pm to 5:00 pm, CEU .4

Room 13

INTRODUCTORY Workshop: This workshop is for anyone involved in or considering the use of thermal sensors for crop, forest or land-use monitoring, geo-botanical prospecting and/or modeling of thermal energy upwelling from terrestrial features.

The goal of this workshop is to provide an examination of factors affecting thermal signals upwelling from terrain features. Effects of these factors on applications of thermal data in agriculture, forestry, geology, water/wetland management, and wildlife management will be presented and discussed.

ASPRS Committee Meetings

Committee Chairs

9:00 am to 10:00 am

Room 1

Division Directors

9:00 am to 10:00 am

Room 2

Awards Committee

10:00 am to 12 noon

Room 1

Electronic Communications Committee

10:00 am to 12 noon

Room 2

New Board Orientation

10:00 am to 12 noon

Greco Boardroom

Evaluation for Certification Committee

1:00 pm to 3:00 pm

Room 1

Region Officers

1:00 pm to 3:00 pm

Room 2

Education and Professional Development Committee

1:00 pm to 3:00 pm

Room 9

Convention Policy and Planning Committee

3:00 pm to 5:00 pm

Room 1

Professional Practice Division (PPD)

3:00 pm to 5:00 pm

Room 9

User Groups

BAE Systems

8:00 am to 12 noon

Room 5

BAE Systems will be demonstrating the latest features of its recent SOCKET SET® v5.4 and SOCKET GXP™ v2.3 software releases. Highlights of these releases are NGATE (New Generation Automatic Terrain Extraction), and connection to GIS databases such as ESRI® geodatabase, respectively. Attendees have the opportunity to preview aspects of the functionality and user interfaces being designed for SOCKET GXP v3.0, which will bring together image analysis, geospatial analysis, photogrammetry and mapping within a single product with a single user interface.

E. Coyote Enterprises/JenaOptronik, ECE, Inc.

8:00 am to 12 noon

Room 7

This User Group will address the advanced large digital format camera JAS150 from Jena-Optronik. With its four backward and forward stereo lines this instrument produces very dense digital elevation models as well as superior images even under difficult conditions because of the full 16bit resolution. The 5cm ground resolution can be achieved with reasonable airspeeds and flight altitude. The cost effective system supports industry standards and enables the integration into existing workflows.

OPTECH

8:00 am to 12 noon

Room 6

Optech Inc., the global market leader in scanned time-of-flight lidar technology is holding a users' group meeting to discuss current lidar technologies, future directions and new cutting-edge applications that will enable users to significantly grow their business and increase their bottom lines. As the pioneers of lidar, Optech continues to look forward and take lidar into areas of specialty that have yet to be tapped. Be part of this exploration and join Optech for these round-table discussions.

DIMAC Systems - VX Services

1:00 pm to 5:00 pm

Room 6

DIMAC SYSTEMS invites you to see the future at our annual User Group Meeting focused on our innovative and affordable new DiMAC large format digital aerial camera. Technological features, future developments and use of the system will be highlighted during this session. This free workshop is open to anyone who wants to learn more about the DiMAC camera and its capabilities.

Merrick

1:00 pm to 5:00 pm

Room 7

The MARS® User Group meeting will provide ASPRS attendees with an opportunity to test-drive Merrick Advanced Remote Sensing (MARS®) software and learn more about its robust functionality. MARS® is a stand-alone Windows application used for lidar data visualization, data classification and analysis functions. The session will also review the latest developments in the field of remote sensing, including hyperspectral/lidar integration and feature extraction methodologies. Conference attendees interested in the latest lidar innovations should not miss this informative session!

Microsoft

1:00 pm to 5:00 pm

Room 5

Through rapidly advancing geospatial technologies, remote sensing and photogrammetry have entered into the world of "augmented" and "virtual reality," evolving from 2D map products to 3D models of the real world now at the fingertips of the average consumer. This user group will look under the hood of Microsoft's Virtual Earth™ and discuss the technologies and procedures that are transforming the once quiet mapping industry into the heart of an informational revolution.

Tuesday, May 8 th			
Time	Event	Room	Attending
6:30 am to 5:00 pm	Registration	Second Floor	
6:45 am to 5:00 pm	Classified Session — The Petapixel Revolution	MacDill AFB	
8:00 am to 5:00 pm	Workshop 10 — Hyperspectral Image Processing and Feature Extraction: Maximizing Geospatial Information Retrieval	Room 8	
8:00 am to 5:00 pm	Workshop 11 — Preparing For ASPRS Certification	Room 9	
8:00 am to 5:00 pm	Workshop 12 — Airborne GPS and Inertia in Support of Triangulation and Orientation of Airborne Framing and Push broom Sensors	Room 11	
8:00 am to 5:00 pm	Workshop 13 — Emerging Technologies in Photogrammetry and Remote Sensing	Room 12	
8:00 am to 12 noon	Workshop 14 — Looking Above the Terrain Model: Lidar for Vegetation Assessment	Room 10	
1:00 pm to 5:00 pm	Workshop 15 — Assessing the Accuracy of GIS Information Created from Remotely Sensed Data: Principles and Practices	Room 10	
8:00 am to 10:00 am	ASPRS Committee Meetings — Journal Policy and Publications Committees	Room 1	
8:00 am to 12 noon	User Group — GeoCue	Room 5	
8:00 am to 12 noon	User Group — ENVI	Room 7	
8:00 am to 12 noon	User Group — Intergraph	Room 6	
1:00 pm to 4:00 pm	User Group — DAT/EM	Room 5	
1:00 pm to 5:00 pm	User Group — ESRI	Room 6	
1:00 pm to 5:00 pm	User Group — Definiens	Room 7	
4:00 pm to 7:00 pm	User Group — INPHO	Room 5	
10:00 am to 12 noon	ASPRS Committee Meetings — Photogrammetric Applications Division (PAD)	Room 1	
10:00 am to 12 noon	ASPRS Committee Meetings — Primary Data Acquisition Division (PDAD)	Room 4	
10:00 am to 12 noon	ASPRS Committee Meetings — Membership Committee	Room 2	
1:00 pm to 3:00 pm	ASPRS Committee Meetings — Photogrammetric Applications Division (PAD) Lidar Subcommittee	Room 13	
1:00 pm to 3:00 pm	ASPRS Committee Meetings — Photogrammetric Applications Division (PAD) Softcopy Subcommittee	Room 4	
1:00 pm to 5:00 pm	ASPRS Committee Meetings — Transportation Surveys Subcommittee	Room 1	
2:00 pm to 5:00 pm	ASPRS Committee Meetings — Region Membership Officers' Training	Room 2	
3:00 pm to 4:00 pm	ASPRS Committee Meetings — Data Preservation and Archiving Committee	Room 4	
4:00 pm to 6:00 pm	ASPRS Committee Meetings — Remote Sensing Application Division (RSAD) and Geographic Information Systems Division (GIS)	Room 4	
5:00 pm to 6:00 pm	ASPRS Committee Meetings — By-Laws Committee	Bayshore Ballroom	
5:00 pm to 6:00 pm	ASPRS Committee Meetings — Division Directors	Greco Ballroom	

Registration Desk

6:30 am to 5:00 pm

Classified Session

The Petapixel Revolution

6:45 am to 5:00 pm

MacDill AFB

IMPORTANT: Bus transportation for attendees will be begin loading from the Marriott Waterside Hotel main entrance at 6:45 am and depart promptly at 7:00 am for the Davis Conference Center at MacDill AFB. Conference attendees **must** take the bus. Only attendees who have submitted clearances to U.S. CENTCOM Security Office and the session POC will be allowed on board. Passengers also must have a photo ID to enter MacDill AFB.

Workshops

Workshop 10

Hyperspectral Image Processing and Feature Extraction: Maximizing Geospatial Information Retrieval

William Farrand, *Space Science Institute*
Stuart Blundell, *Visual Learning Systems, Inc.*

8:00 am to 5:00 pm, CEU .8

Room 8

INTERMEDIATE Workshop: Intended for users of remote sensing data including analysts who may have used multispectral data and GIS systems and are now interested in using hyperspectral data and feature extraction in their work. Also appropriate for managers who must make decisions about what kind of remote sensing data to purchase for their projects and/or what kind of image processing or feature extraction software that they should purchase.

Imaging spectrometry, commonly referred to as hyperspectral remote sensing, provides high-resolution spectral information for environmental and natural resource projects. Hyperspectral image processing approaches can also be applied to broadband multispectral imagery and results from these analyses can be used to enhance automated feature extraction techniques. In this workshop, we will provide students with an introduction to imaging spectrometry, hyperspectral image processing techniques, and automated feature extraction to demonstrate how results obtained from digital imagery can add value to maintenance of geospatial databases. Hyperspectral data requires a substantially different processing approach from that required for multispectral data; however, such an approach can add value to information extraction from broadband multispectral data. We will emphasize that the added value in imaging spectrometry is on the spectrometry, the ability to identify materials based on their reflectance signatures. We will briefly discuss the phenomenology of reflectance spectrometry and explain why some materials are more amenable to mapping than others. We will describe commercially available processing systems that are available for processing hyperspectral and multispectral data and discuss the processing techniques within those packages. Certain processing techniques are better suited to certain applications. We will explain why this is so. We will also discuss some of the advantages and shortcomings of current airborne and orbital hyperspectral systems as well as planned systems.

The student will be introduced to the concepts of developing feature extraction models for automated feature extraction using hyperspectral, Lidar, DEMs and multispectral data within a GIS. We will provide real-world examples of how end products, derived from hyperspectral and multispectral data processing, including resultant mineral and vegetation species maps, can be incorporated into the Feature Analyst for feature extraction in a GIS. The desired final result is a map that will be of immediate utility to the end user.

We will provide a package of materials to the students that will include hard copies of the material presented and an extensive list of references on the topics addressed. We will engage the class with an in-class exercise and several "take-home" hands-on exercises.

Workshop 11

Preparing For ASPRS Certification

Robert Burtch, Professor, *Ferris State University*

8:00 am to 5:00 pm, CEU .8

Room 9

INTERMEDIATE Workshop: Assumes participants have subject knowledge and are serious about taking the Certification Exam.

The purpose of this workshop is to prepare individuals who are planning to sit for the ASPRS Certification exams as a Certified Photogrammetrist or Certified Mapping Scientist in either Remote Sensing or GIS. The workshop will begin by explaining the purpose and form of the exam. It will then identify key topical areas that an applicant should be aware of prior to taking the exam. Topics will start with a review of the basic concepts and sample questions to show how they will be tested for on the exam. Finally, the workshop will try to identify resources in which exam takers should be aware of and study from in their preparation for the examination.

Workshop 12

Airborne GPS and Inertia in Support of Triangulation and Orientation of Airborne Framing and Push broom Sensors

Qassim A. Abdullah, Chief Scientist, *EarthData International of Maryland*
Riadh Munjy, Professor of Surveying and Civil Engineering, *California State University, Fresno*

Mushtaq Hussain, Professor of Surveying and Civil Engineering,
California State University, Fresno

8:00 am to 5:00 pm, CEU .8

Room 11

INTERMEDIATE Workshop: In order to maximize the benefits of this course, participants should have some knowledge or previous experience with aerial triangulation and the use of ABGPS/IMU to orient airborne sensors. In addition, a good understanding of photogrammetric and mapping accuracy standards are suggested.

The workshop will provide the participants with good understanding of the new concept of controlling the camera position with a differential carrier phase GPS receiver and an Inertial Measurement Units (IMU) to dramatically reduce the amount of ground control required for conventional aerial triangulation. In addition, the workshop will discuss the principal of push broom digital imaging and methods of triangulating the newly utilized framing digital and push broom sensors. The workshop will also present design concepts, practical results, and strengths and shortcomings of the technology. Participants, at the end of the workshop, are expected to have enough understanding to enable them to evaluate, design, and/or execute an airborne GPS-controlled aerial-triangulation mission.

Workshop 13

Emerging Technologies in Photogrammetry and Remote Sensing

Mike Renslow, *Renslow Mapping Services*
Claire Kiedrowski, *KAPPA Mapping, Inc.*

8:00 am to 5:00 pm, CEU .8

Room 12

INTERMEDIATE Workshop: This workshop provides an overview of emerging technologies and their impact on photogrammetry and remote sensing methodologies. The advance towards full digital mapping from start to finish, and the capacity to capture very large amounts of data supported by rapid processing and software will alter the way maps and imagery are produced in the near future. At

the same time, active sensors, hand-held data collection devices, and feature extraction are changing fundamental mapping procedures and the way data is supplied to GIS.

Participants will receive an overview of the systems, technologies, and impacts on mapping in the next two to three years, as well as, the institutional issues involved in implementation.

Workshop 14

Looking Above the Terrain Model: Lidar for Vegetation Assessment

Sorin C. Popescu, *Texas A&M University*

8:00 am to 12:00 noon, CEU .4

Room 10

INTERMEDIATE Workshop: The participants are expected to have a basic understanding of remote sensing techniques and image processing.

The overall goal of this workshop is to introduce participants to lidar processing techniques and applications for deriving information on forest resources and canopy parameters. More specific objectives are to: (1) briefly familiarize participants with basic lidar and laser ranging concepts; (2) introduce types of lidar sensors for forest resources assessment and the Las Lidar data format; (3) review algorithms for deriving information on forest resources; (4) review processing techniques for generating canopy height models and "multi-band" Lidar height bins, (5) introduce participants to TreeVaW, a Lidar processing software for identifying and measuring individual trees on Lidar-derived canopy height models, and (6) discuss an array of processing techniques derived from multi- and hyper-spectral image processing for using Lidar-derived data products for assessing vegetation parameters.

Workshop 15

Assessing the Accuracy of GIS Information Created from Remotely Sensed Data: Principles and Practices

Kass Green, President, *Alta Vista*

Russell G. Congalton, *University of New Hampshire*

1:00 pm to 5:00 pm, CEU .4

Room 10

INTERMEDIATE Workshop: In order to maximize the benefits of this course, participants should have previous experience with GIS and remotely sensed data. In addition, a good understanding of statistical principles is also strongly suggested.

This course focuses on the principles, techniques, and practical aspects of assessing the accuracy of GIS information derived from remotely sensed data. Participants will receive instruction in how to design accuracy assessment procedures, allocate accuracy assessment samples, collect both field and photo reference data, and analyze accuracy assessment results. While spatial accuracy is addressed, the course primarily focuses on methods and analysis for thematic accuracy assessment. Examples of accuracy assessment case studies based on actual project data will be presented and discussed. Each participant in this course will come away with a solid understanding of accuracy assessment procedures for spatial data, and the knowledge to properly interpret the results of such procedures.

ASPRS Committee Meetings

Journal Policy and Publications Committees

8:00 am to 10:00 am

Room 1

Photogrammetric Applications Division (PAD)

10:00 am to 12 noon

Room 1

Primary Data Acquisition Division (PDAD)

10:00 am to 12 noon

Room 4

Membership Committee

10:00 am to 12 noon

Room 2

Photogrammetric Applications Division (PAD)

Lidar Subcommittee

1:00 pm to 3:00 pm

Room 13

Photogrammetric Applications Division (PAD)

Softcopy Subcommittee

1:00 pm to 3:00 pm

Room 4

Transportation Surveys Subcommittee

1:00 pm to 5:00 pm

Room 1

Region Membership Officers' Training

2:00 pm to 5:00 pm

Room 2

Data Preservation and Archiving Committee

3:00 pm to 4:00 pm

Room 4

Remote Sensing Application Division (RSAD) and Geographic Information Systems Division (GIS)

4:00 pm to 6:00 pm

Room 4

By-Laws Committee

5:00 pm to 6:00 pm

Bayshore Ballroom

Division Directors

5:00 pm to 6:00 pm

Greco Ballroom

User Groups

GeoCue

8:00 am to 12:00 noon

Room 5

GeoCue Corporation will host its annual North American user's group meeting at the 2007 ASPRS Conference in Tampa, FL. We will be presenting our latest GeoCue process management solutions as well as soliciting user feedback on features needed for future versions. GeoCue Corporation is a software development and consulting services company specializing in geospatial production management solutions. Our products provide an integrated end-to-end processing framework that, when combined with industry leading production tools, significantly reduces production time from data acquisition to finished product.

ENVI

8:00 am to 12:00 noon

Room 7

ITT Visual Information Solutions invites you to the ENVI User Group Meeting. If you're an ENVI user or would like to learn about ENVI's

image exploitation capabilities, this meeting is for you. See ENVI users from a variety of disciplines showcase their ENVI applications. Talk to the ENVI experts and learn more about some of the latest advances in ENVI including a new user interface, feature extraction, interoperability, and NITF support enhancements.

Intergraph

8:00 am to 12:00 noon

Room 6

Join Intergraph to learn about the latest updates in Intergraph's earth imaging (photogrammetry) products and open, best-in-class solutions. Hear about Intergraph's complete systems for producing maps, digital terrain models (DTMs), and other geographic data that government, military, and commercial organizations need to preserve accuracy and precision of data. Intergraph experts will highlight Intergraph's industry-leading technology including the latest information on the Z/I Imaging Digital Mapping Camera (DMC), as well as flight and sensor management systems and automated production systems.

DAT/EM

1:00 pm to 4:00 pm

Room 5

DAT/EM Systems International (est. 1985), an Anchorage, Alaska-based company, is a leading developer of photogrammetric software and hardware solutions. DAT/EM specializes in 3D stereo viewing and precise feature data collection software. Its products include the SUMMIT EVOLUTION™ digital stereoplotter and DAT/EM STEREO CAPTURE™, which allows stereoplotters to digitize directly into ArcGIS®. DAT/EM CAPTURE allows stereoplotters to digitize directly into AutoCAD® and MicroStation®. Currently, DAT/EM supports over 350 companies in 40 countries. DAT/EM's web address: www.datem.com.

ESRI

1:00 pm to 5:00 pm

Room 6

ESRI invites you to our User Group on May 8 to see and hear how the latest ArcGIS® software can enhance the work of your organization. ESRI staff will demonstrate raster data management, image server and ArcGIS® server and desktop products that will help you solve problems and make smart and timely decisions. A question and answer time will also encourage a forum for discussion. Please join us as we explore ESRI's latest imagery and raster management technology. www.esri.com/maps

Definiens

1:00 pm to 5:00 pm

Room 7

The Definiens User Group will consist of a presentation on the company and its eCognition Network Technology; presentations from select Definiens' eCognition customers; and a product presentation featuring a beginning to end workflow. Definiens products provide solutions for geo-intelligence, infrastructure planning, natural resource management and environmental monitoring.

INPHO

4:00 pm to 7:00 pm

Room 5

INPHO, leading supplier of solutions for photogrammetry and terrain modeling, will present the major new release 5.0 of INPHO's photogrammetric system. Many new features of MATCH-AT, MATCH-T, DTMaster, OrthoMaster and OrthoVista will be demonstrated, as well as ApplicationsMaster, the new core of the system. The meeting is open to all users of INPHO products, as well as to prospective new customers.

Interactive Networking HOT TOPICS

The one-hour **HOT TOPIC** discussion groups were such a success at the 2006 Annual Conference that we are offering them again this year. We asked you what you wanted to discuss, and here are your top seven choices. **This is an opportunity for all attendees** to weigh in with their thoughts on the issues listed below.

Hosted by ASPRS Divisions and Committees, you may attend any of the **HOT TOPICS** that you like.

Wednesday, May 9

11:00 am to 12:00 noon

The Future of Land Imaging (Room 1)— Is Landsat and moderate resolution imagery important to you? This Hot Topic will provide an update on the status of the Future of Land Imaging (FLI) Inter-agency Working Group Report to the President. Let your voice be heard in this timely discussion of the future of U.S. involvement in moderate resolution satellite imagery collection and distribution.

State Licensing of Geospatial Professionals and Related Issues (Florida Ballroom Salon I) — Additional states are adopting laws that affect the licensing of geospatial professionals. Attend this meeting to discuss what's going on in your state. In addition, give us your feedback on the definition of professional photogrammetric services and the procurement guidelines for Qualifications Based Selection (QBS) of these services. A joint task force, composed of members from ASPRS, MAPPS & ACSM, is in the process of reviewing and updating this material.

Future Commercial Use of Unmanned Aerial Vehicles (UAVs) (Florida Ballroom Salon II) — The use of UAVs is moving from a strictly military environment to a broader commercial environment. Discussion will focus on what new commercial uses are evolving and how UAVs will be used to greater advantage by our industry.

Challenges and Opportunities in Remote Sensing Education (Florida Ballroom Salon III) — If you are a professor teaching remote sensing, this Hot Topic will appeal to you. Compare notes on what you teach, learn about new course curriculums offered, and get feedback from potential employers on what skills they look for from students entering the workforce.

Getting a Job (Room 4) — How to prepare for entering the job force, resume and interviewing tips, and more.

Thursday, May 10

11:00 am to 12:00 noon

The Landsat Data Continuity Mission (LDCM) (Room 1) — A review of the status of LDCM development followed by a discussion of science and applications requirements and general specifications for LDCM data products.

Geo-Object-Based Image Analysis (GEOBIA): A paradigm shift from arbitrary pixels to meaningful geo-objects (Florida Ballroom Salon I) — Geo-Object Based Image Analysis is a recent sub-discipline of Geographic Information Science devoted to developing automated methods to partition remote sensing (RS) imagery into meaningful geographically based image-objects, and assessing their characteristics through spatial, spectral and temporal scales. Its applications range from agriculture and natural resource management, to national defense and global climate change. Its economic impact spans from data collection, hardware and software vendors, developers and users, to recipients of sound sustainable environmental policy.

*Attention Students and Young Professionals,
these events are just for you!*



Speed Networking

Tuesday, May 8th, 5:00 pm to 6:00 pm
Room 13



**ASPRS thanks MJ Harden for
their support of this event.**

Want to get to know other students and young professionals from around the country and the world? Is this the first time you will be attending an ASPRS Conference? Whether it's your first ASPRS conference or your fifth, you are invited. The new ASPRS Student Advisory Council is hosting a speed networking event to introduce you to other students and young professionals attending the conference.

You've heard of speed dating; we are offering speed networking. Spend 30 minutes getting to know at least 7 new people who you can hang out with for the rest of the week. After this session, you'll want to go out with your new friends to the Florida Region Welcome Reception at Jackson's Bistro.

Exhibit Hall Guided Tour

Wednesday, May 9th, 2:00 pm to 3:00 pm
Grand Ballroom Entrance

The ASPRS Sustaining Members Council is hosting a guided tour of the exhibit hall for students. This is your opportunity to meet the exhibitors, up close and personal, when the hall isn't too crowded.



Welcome to Tampa

Tuesday, May 8
6:00 - 9:00 pm



The Florida Region of ASPRS cordially invites all conference participants to attend its Welcome Reception being held Tuesday, May 8th from 6:00 pm to 9:00 pm at Jackson's Bistro; Just a short walk from the Marriott Waterside Hotel. Come enjoy this scenic waterfront view of downtown Tampa while reaci Tampa's finest local cuisine.

On behalf of the Florida Region Board of Directors and our sustaining member sponsors we look forward to seeing you there.

To download an invitation to the 2007 ASPRS Annual Conference Opening Reception please go to the Florida Region ASPRS website at <http://www.flasprs.org/index.html>. **Please bring this invitation with you to the reception.**

Wednesday, May 9th			
Time	Event	Room	Attending
6:30 am to 5:45 pm	Registration	Level Two	
8:00 am to 5:00 pm	Poster Display	Florida Ballroom Foyer	
8:00 am to 9:00 am	Opening Session & ASPRS Awards Presentation	Florida Ballroom	
9:15 am to 10:45 pm	Special Session — Training Session on Digital Data Contracting and Quality Assessment	Room 1	
9:15 am to 10:45 pm	Panel Discussion — Trends in Digital Aerial Imaging: Part A	Room 4	
9:15 am to 10:45 pm	Special Session — Geospatial Solutions at the FWC Fish and Wildlife Research Institute	Room 10	
9:15 am to 10:45 pm	Technical Sessions 3-11	See individual session description	
10:00 am to 7:00 pm	Exhibit Hall	Grand Ballroom & Foyers	
10:45 am to 11:00 am	Beverage Break	Grand Ballroom & Foyer	
11:00 am to 12 noon	Interactive Networking Hot Topics — The Future of Land Imaging	Room 1	
11:00 am to 12 noon	Interactive Networking Hot Topics — State Licensing of Geospatial Professionals and Related Issues	Florida Ballroom Salon I	
11:00 am to 12 noon	Interactive Networking Hot Topics — Future Commercial Use of Unmanned Aerial Vehicles (UAVs)	Florida Ballroom Salone II	
11:00 am to 12 noon	Interactive Networking Hot Topics — Challenges and Opportunities in Remote Sensing Education	Florida Ballroom Salone III	
11:00 am to 12 noon	Interactive Networking Hot Topics — Getting a Job	Room 4	
12:45 pm to 1:45 pm	18th Annual Awards Luncheon and 73rd Installation of Officers	Florida Ballroom VI	
1:30 pm to 3:00 pm	Panel Discussion — Airborne Digital Mapping Camera Systems: Owners' Perspective	Room 4	
1:30 pm to 3:00 pm	Special Session — Training Session on Digital Data Contracting and Quality Assessment	Room 1	
1:30 pm to 3:00 pm	Special Session — Training Session on USGS Imagery Specifications	Room 5	
1:30 pm to 3:00 pm	Technical Sessions 16-23	See individual session description	
2:00 pm to 3:00 pm	Exhibit Hall Guided Tour for Students	Grand Ballroom & Foyer	
3:00 pm to 3:30 pm	Exhibit Hall Beverage Break	Grand Ballroom & Foyer	
3:30 pm to 5:00 pm	Special Session — Training Session on Digital Data Contracting and Quality Assessment	Room 1	
3:30 pm to 5:00 pm	Special Session — Update on FLI and LDCM	Room 12	
3:30 pm to 5:00 pm	Special Session — Airborne GNSS for Photogrammetry	Room 4	
3:30 pm to 5:00 pm	Technical Sessions 27-34	See individual session description	
5:30 pm to 7:00 pm	Exhibitor's Reception	Grand Ballroom & Foyer	

Registration Desk

6:30 am to 5:45 pm

Exhibit Hall

10:00 am to 7:00 pm
Grand Ballroom & Foyer

Opening Session

8:00 am to 9:00 am

Florida Ballroom

Michael Jones

Chief Technologist
Google Earth, Google Maps, and Google
Local Search



The Neighborhood Geospatial Agency

Innovation often arrives from unexpected directions, creating important opportunities for those who embrace change. This message is evidenced in the popularity of Google Earth among the newest class of geospatial analysts — everyday people in all walks of life. With a user base placing Google Earth within the ten most populous nations of the world, remote sensing and geospatial investigation have become household concepts. This mass appeal raises new questions in national security, privacy, business, and governance. Mr. Jones will address these topics and suggest ways that these innovations can best be used to serve the world.

Michael Jones is the Chief Technologist of Google's Earth, Maps, and Local Search efforts. He was formerly the CTO of Keyhole Corporation, CEO of Intrinsic Graphics, the Director of Advanced Graphics at Silicon Graphics, and a developer of scientific and interactive computer graphics software for many years. He is an avid traveller and an amateur photographer with a home-built 4 gigapixel camera made with parts from the U2/SR71 optical bay.

2008 ISPRS Congress

Prof. Chen Jun, ISPRS Congress Director will give a brief look at the planning for the 2008 ISPRS Congress to be held in Beijing, China.

ASPRS Awards

SAIC/Estes Memorial Teaching Award

Marvin Bauer

Robert N. Colwell Memorial Fellowship Award

Michael Falkowski

BAE Systems Award

Awardee name not available at press time

John C. Curlander

General Manager
Microsoft Boulder



The Virtual World Online — Mapping as a Web Service

The geospatial industry has rapidly found itself at the heart of an information revolution that is changing the way individuals, businesses and governments are gathering information about the world. The emergence of web-based mapping services—featuring high-resolution imagery and photorealistic, navigable 3D cities—is allowing individuals and organizations to visualize critical data relevant to their needs within the context of location. Through such services, users with no previous GIS experience, can now rapidly access geospatial data over the internet, gaining unprecedented insight into environments and situations. This talk will address this emerging trend and discuss the pros and cons of such a service with specific examples and demonstrations using Microsoft's Virtual Earth web service.

Dr. John C. Curlander is internationally recognized for his work in synthetic aperture radar (SAR) systems and data processing. His research efforts have led to many of the operational techniques currently used in today's SAR processors.

From 1980 to 1992, Curlander worked at the Jet Propulsion Laboratory in Pasadena, California, where he became responsible for all SAR ground system activities. At JPL, Dr. Curlander directed the implementation of NASA's SAR ground data systems and led the systems engineering activities on a number of the spaceborne SAR programs.

In 1992, Curlander accepted the position of President and CEO of Vexcel Corporation in Boulder, Colorado. Since the May 2006 acquisition of Vexcel by Microsoft, Curlander has served as General Manager of what is now known as Microsoft Boulder. In this role, Curlander oversees the business unit to ensure best execution of the vision that Microsoft has for the group's role in the success of Virtual Earth and the continued success of current Vexcel business activities.

Exhibit Hall

10:00 am to 7:00 pm

Grand Ballroom & Foyer

Technical Sessions

9:15 am to 10:45 am

1. Special Session

Training Session on Digital Data Contracting and Quality Assessment

Bryan Christensen, *SAIC/U.S. Geological Survey*
Steve Helterbrand, Geoff Gabott, and David Davis
Room 1

This session will provide training on the USGS Contracting Guidelines, Data Provider Certification, and Data Acceptance Standards. **The entire training package will be presented in each of the 3 sessions.**

2. Panel Discussion

Trends in Digital Aerial Imaging: Part A

Gregory Stensaas, *U.S. Geological Survey*
Room 4

3. Agricultural Applications

Moderator: David Alvarez, *CDM*
Room 5

Evaluating the Accuracy of 2005 Multitemporal TM and AWiFS Imagery for Cropland Classification of Nebraska

Robert Seffrin, *U.S. Department of Agriculture/NASS*
Mike Craig

Using ASTER Data to Detect Crop Residue and to Improve Crop Classification

David Schaub, *Altarum Institute*
Nancy French, Colin Brooks, and Richard Powell

Object-oriented Analysis of Historical and Current Panchromatic Aerial Imagery for Farmland Characterization

Carl Zimmerman, *University of Connecticut*
Daniel Civco and James Hurd

4. Calibration Issues in Photogrammetry

Moderator: Edward Oshel, *Image Science & Analysis Group*
Room 6

IMU and UltraCam D Misalignment Calibration

Khaldoun Qtaishat, *IESSG, Institute of Engineering and Space Geodesy, University of Nottingham*, England
Matrin Smith, David Park, and Jamieson Allan

Comparisons of Interior and Exterior Orientation Parameters of Several Photogrammetric Software Packages in Use at the Johnson Space Center

Edward Oshel, *Image Science & Analysis Group*
Donn Liddle

Specifications and Standards for the Calibration and Stability Analysis of Medium-Format Digital Cameras

Ayman Habib, *Department of Geomatics Engineering, University of Calgary*, Canada
Paul Quackenbush, Gregory Stensaas, and Mohannad Al-Durgham

A Review of Camera Calibration Based on Experience at the Johnson Space Center

Edward Oshel, *Image Science & Analysis Group*
Donn Liddle

5. Change Detection

Moderator: Jeff Liedtke, *eMap International*
Room 7

Bottom Material Change Detection Using Relative Bottom Reflectance

Houzhi Pan, *Optech, Inc.*, Canada

Gunho Sohn, Paul LaRoque, Karen Francis, David Reid, Vincent Tao, and John Miller

Detecting the Topographic Changes of Spatial Features from Satellite Images with the Edge Flow Techniques

Yishuo Huang, *Department of Construction Engineering, University of Technology*, Taiwan

A Sophisticated Optimum Threshold(s) Search Technique for Automated Binary Change Detection

Jungho Im, *University of South Carolina*

John Jensen, Michael Hodgson, and Jinyoung Rhee

Analyzing Multi-Sensor Data Fusion Techniques: A Multi-Temporal Change Detection Approach

C. Shah, *SUNY-ESF*

L. Quackenbush

6. Data Fusion - Automation

Moderator: Vijay Shah, *Mississippi State University*
Room 8

Development of a Blunder Detection Approach for Automated Point Matching During Vector to Image Data Integration

Lawrence Stanislawski, *SAIC/U.S. Geological Survey*

Michael Finn and Lynn Usery

New Methods for Automated Mars Rover Localization

Ron Li, *The Ohio State University*

Kaichang Di, Sanchit Agarwal, Jue Wang, Andrew Howard, and Larry Matthies

A Multiresolution Segmentation Method for Feature Extraction in Image Information Mining

Vijay Shah, *GeoResources Institute, Mississippi State University*

Nicholas Younan, Surya Durbha, and Roger King

7. DEM — Accuracy Assessment I

Moderator: Allen Brock, *Photo Science*
Room 9

Estimation of Accuracy — A Comparison of Lidar and Survey-Based Digital Terrain Models

Yvonne Paul, *SUNY-ESF*

Lindi Quackenbush

Innovative Targets for Lidar Horizontal and Vertical Control

Jim Hogarty, *Integrity Applications Incorporated*

Todd Johannesen and Craig Rodarmel

Multiple DEM Measured Accuracy

Jeff Carpenter, *Integrity Applications Incorporated*

Jim Hogarty, Todd Johannesen, and Jeff Carpenter

8. Digital Photogrammetric Cameras and Photogrammetric Analysis using Video Sensors

Moderator: Michael Shillenn, *Photo Science*

Room 13

A Multi-variant Analysis of Time Synchronization Errors in Motion Imagery

Aaron Braun, *Integrity Applications, Inc*

Kurt Rogers

A Study on Sensor Modeling and Triangulation for an Airborne Three Line Scanner

Wonjo Jung, *Purdue University*

James Bethel

9. Education - College and University Geospatial Curricula

Moderator: Cindy Schmidt,

Room 12

Development of a 4 -Year Geomatics Program with a 2+2 Curriculum

Emmanuel U.Nzewi, *North Carolina A&T State University*

Increasing Diversity in Geosciences: Promoting Geospatial Technology at North Carolina Central University

Rakesh Malhotra, *North Carolina Central University*

Gordana Vlahovic, Rakesh Malhotra, Mike Renslow, Albert Barnett, and Jasper Harris

Kentucky's Experiment Incorporating IAEGS's Remote Sensing Courseware into the 2-year Kentucky Community and Technology College System Curriculum

Demetrio Zourarakis, *Kentucky Division of Geographic Information*

Vince DiNoto Jr. and Demetrio Zourarakis

Teaching Geoscience through Research

Marguerite Madden, *Center for Remote Sensing and Mapping Science, University of Georgia*

10. Emerging Unmanned Aerial Systems Technology

Moderator: Tom Mace, *NASA*

Room 11

Experience with Science Applications in the National Airspace System

Robert Curry, Chris Jennison, and Brent Cobleigh, *NASA/Dryden Flight Research Center*

Telepresence and Disruption Tolerant Networking over the Horizon

Lawrence Freudinger, *NASA/Dryden Flight Research Center*

The Ground Control Room as an enabling technology in the Unmanned Aerial System

Gary Gear, *Embry Riddle Aeronautical University, Prescott, Az* and

Thomas Mace, *NASA/Dryden Flight Research Center*

NASA ER-2: Flying Laboratory for Earth Science Studies & Remote Sensing

Robert Navarro, *NASA/Dryden Flight Research Center*

11. Feature Extraction Techniques

Moderator: Robert Crawford, *Intermap Technologies, Inc.*

Room 2

Automatic Extraction of Linear Features from Lidar and Imagery

Charalambos Poullis, *IMSC/USC*

Suya You and Ulrich Neumann

Ground-based Aerial Photography to Support Traffic Flow Estimation

Nora Csanyi, *Department of Civil and Environmental Engineering and Geodetic Science, The Ohio State University*

Charles Toth

12. Special Session

Geospatial Solutions at the FWC Fish and Wildlife Research Institute

Moderator: Kathleen O'Keife, *Florida Fish & Wildlife Conservation*

Room 10

Sponsored by the ASPRS GIS Division, Organized by Paula F. Smit, Director GISD, Raytheon Company

Oracle & GIS on Windows (It's Not as Bad as You Think!)

Gail McGarry MacAulay, *Florida Fish & Wildlife Conservation Commission*

Virtual GIS: Web-based GIS Applications at the Fish & Wildlife Research Institute

Kathleen O'Keife, *Florida Fish & Wildlife Conservation Commission*

Exhibit Hall Beverage Break

10:45 am to 11:00 am

Grand Ballroom & Foyer

Interactive Networking – Hot Topics

11:00 am to 12:00 noon

See page 31 for details

The Future of Land Imaging (Room 1)

State Licensing of Geospatial Professionals and Related issues (Florida Ballroom Salon I)

Future Commercial Use of Unmanned Aerial Vehicles (UAVs) (Florida Ballroom Salon II)

Challenges and Opportunities in Remote Sensing Education (Florida Ballroom Salon III)

Getting a Job (Room 4)

18th Annual Awards Luncheon and 73rd Installation of Officers

12:15 pm to 1:45 pm

Florida Ballroom VI

The 2007 award recipients will be honored at this luncheon. The annual business meeting of the ASPRS will include installation of Officers and Directors. Kari Craun, outgoing President, will summarize the past year's events and Jim Plasker, Executive Director, will present the annual report of the Society.

Luncheon tickets are required. They may be purchased at the ASPRS Registration Desk on Level Two of the Marriott Waterside Hotel until 5:00 pm on Monday, May 7. All on-site sales are subject to availability. The cost is \$45 per person.

Limited seating in the rear of the room is available at no cost to conference registrants wishing to attend the ceremony and business meeting only.

Technical Sessions

1:30 pm to 3:00 pm

13. Panel Discussion

Airborne Digital Mapping Camera Systems: Owners' Perspective

Qassim A. Abdullah, *EarthData International, Inc.*

John Welter, Layton Hobbs, Wolfgang Schickler, Ann Miglarese, Craig Molander, Michael Ritchie, and Raymond Brouillette
Room 4

14. Special Session

Training Session on Digital Data Contracting and Quality Assessment

Bryan Christensen, *SAIC/U.S. Geological Survey*
Steve Helderbrand, Geoff Gabott, and David Davis
Room 1

This session will provide training on the USGS Contracting Guidelines, Data Provider Certification, and Data Acceptance Standards. **The entire training package will be presented in each of the 3 sessions.**

15. Special Session

Training Session on USGS Imagery Specifications

Brian Huberty, *U.S. Fish & Wildlife Service*
Room 2

16. Classification I

Moderator: David Johnson, *USDA*
Room 5

Classifier Shootout: A Quantitative Assessment of Three Popular Image Classification Methodologies

David Johnson, *U.S. Department of Agriculture/National Agricultural Statistics Service*

Classification of Natural vs. Artificial Wetlands using Fractal Dimension with Raster and Vector Data: A Comparative Analysis

Barnali Dixon, *University of South Florida - Geo-Spatial Analytics Lab*
Lydia Prieto and Alvan Karlin

An Accuracy Assessment of Biomass and Forested Area Classifications from MODIS, Landsat TM, and Forest Inventory Plot Data

Dumitru Salajanu, *U.S. Department of Agriculture Forest Service*
Dennis M. Jacobs

Object-based Forest Classification using Spectral and Spatial Information from IKONOS Images

Minho Kim, *Center for Remote Sensing and Mapping Science (CRMS), Department of Geography, University of Georgia*
Marguerite Madden

17. Data Fusion - Imagery and Lidar

Moderator: Clive Fraser, *The University of Melbourne, Australia*
Room 8

Registration of Photogrammetric and Laser Scanner Data for Generation of 3D

Clive Fraser, *The University of Melbourne, Australia*
Khalil Al-Manasir

Using Lidar-derived Fuel Maps with FARSite for Fire Behavior Modeling

Muge Mutlu, *Texas A&M University*
Sorin Popescu

Geometric Registration of Aerial Images with Lidar Data Using Planar Surface Patches as Control Information

Impyeong Lee, Kyoungah Choi, and Yunsoo Choi, *The University of Seoul, South Korea*

Autonomous Non-Linear 3-Dimensional Modeling with Lidar and IFSAR Data for a Production System

Mark Rahmes, *Harris Corporation*
Josef Allen and Harlan Yates

18. Earth Remote Satellite Systems

Moderator: Gregory Stensaas, *USGS*
Room 7

Assessment of Landsat 7 ETM+, AWiFS, and UK-DMC Satellite Imagery in Agriculture Extraction and Illicit Poppy Cultivation Estimates

Wendy Wilson, *MDA Federal Inc.*
Jacqueline Luders and Clay Baros

Discovering the Needs of Landsat Users: Now and in the Future

Ann Krause, *SAIC, U.S. Geological Survey EROS*

Earth Observations from ALOS: The Americas ALOS Data Node perspective

Don Atwood, *Alaska Satellite Facility*
Nettie LaBelle-Hamer, Scott Arko, and Jeremy Nicoll

U.S. and International Satellite Characterization in Support of Global Earth Observation

Gregory Stensaas, *U.S. Geological Survey, EROS*

19. EPA: Geospatial Quality Assurance

Moderator: Demetrio P. Zourarakis, *Kentucky Division of Geographic Information*
Room 6

Geospatial Information Technology and Information Management Quality Assurance

George Brillis, *U.S. Environmental Protection Agency*

US EPA Geospatial Quality Council: Ensuring Quality in Geospatial Solutions

George Brillis, *U.S. Environmental Protection Agency*

Remote Sensing: Quality Assurance and Error Propagation

George Brillis, *U.S. Environmental Protection Agency*

Planning Quality in Geospatial Projects

George Brillis, *U.S. Environmental Protection Agency*

20. Feature Extraction

Moderator: Yuyu Zhou, *University of Rhode Island*
Room 9

Semi-automatic Vehicle Information Extraction From QuickBird Images

Zhen Xiong, *University of New Brunswick, Canada*
Yun Zhang

A MANOVA-based and Object-oriented Statistical Method for Extraction of Impervious Surface Area

Yuyu Zhou, *University of Rhode Island*
YeQiao Wang

An Automated Delineation Tool for Assisted Interpretation of Digital Imagery

Geoffrey J. Hay, *Foothills Facility for Remote Sensing and GIScience, Canada*
Guillermo Castilla

Towards the Development of Next Generation Remote Sensing Technology- ERDAS IMAGINE Incorporates a Higher Order Feature Extraction Technique Based on ICA

C. Shah, *University of California, Los Angeles*
I. Anderson

21. GPS/INS - Navigation and Processing

Moderator: Yaron Felus, *Ferris State University*
Room 11

Comparison of Adjustment Methods for GPS Datum Transformations

Yaron Felus, *Ferris State University*
Brian Romsek and Robert Burtch

Study on UAV Real-time Navigation for 2D Mapping

Guoqing Zhou, *Old Dominion University*

Performance Analysis of a Personal Navigator System

Shahram Moafipoor, *The Ohio State University*
Charles Toth and Dorota A. Grejner-Brzezinska

New Concept of Profile Based Pavement Measurement System

Tamas Lovas, *Budapest University of Technology and Economics, Hungary*
TImre Kertesz, Istvan Fi, and Arpad Barsi

22. Image Analysis Using Geometric Constraints

Moderator: Edward J. Kurtz, _____
Room 12

Feature-based Transformation Models for Satellite Image Registration and Terrain Modeling

Ahmed Shaker, *Institute of Geomatics, Spain*
Ismael Colomina

Aerial and Satellite Image Segmentation Based on Shape-constrained Geodesic Active Contours

Konstantinos Karantzas, *Remote Sensing Lab, National Technical University of Athens, Greece*
Haris Papasaika and Nikos Paragios

A New Methodology for Line Accuracy Measurement for Spatial Data Quality Management

Joon Heo, *Yonsei University, South Korea*
Ji Sang Park, Jin Woo Kim, and Hong-Gyoo Sohn

Edge Detection of Man Made Objects using Wavelet

Varvara Noutsou, *Remote Sensing Laboratory, Dept. Rural & Surveying Engineering, National University of Athens, Greece*
Demetre Argialas, Pantelis Michalis, and Varvara Noutsou

23. Wildlife Habitat Analysis

Moderator: Greg McDermid, *University of Calgary, Canada*
Room 10

Mapping and Update of Vegetation and Land Cover for Grizzly Bear Research and Conservation

Greg McDermid, *Department of Geography, University of Calgary, Canada*

Predicting Distribution of *Hepatica americana*; Related to Topography, Vegetation, and Climate

Kyung-Ah Koo, *Institute of Ecology, University of Georgia*

Analysis of Sea Ice Fragmentation Using SAR Imagery to Determine Pacific Walrus and Polar Bear Ecoregions

Cyrus Hiatt, *NASA - DEVELOP*
Charles Brigham, Amber Brooks, Megan Dolson, Jacqueline Rudy, Ilan Kolkowitz, Cindy Schmidt, and J.W.Skiles

Exhibit Hall Guided Tour for Students

Grand Ballroom & Foyer

2:00 pm to 3:00 pm

The ASPRS Sustaining Members Council is hosting a guided tour of the exhibit hall for students. Meet at the Grand Ballroom Foyer entrance to the exhibit area promptly at 2:00 pm. This is your opportunity to meet the exhibitors, up close and personal, when the hall isn't too crowded.

Exhibit Hall Beverage Break

3:00 pm to 3:30 pm

Grand Ballroom & Foyer

DAILY PRIZE DRAWING!

Stop by ASPRS Booth #116 in the Exhibit Hall to see our new books. Enter the daily prize drawing.

Booth #116

Technical Sessions

3:30 pm to 5:00 pm

24. Special Session

Training Session on Digital Data Contracting and Quality Assessment

Bryan Christensen, SAIC/U.S. Geological Survey
Steve Helderbrand, Geoff Gabott, and David Davis
Room 1

This session will provide training on the USGS Contracting Guidelines, Data Provider Certification, and Data Acceptance Standards. **The entire training package will be presented in each of the 3 sessions.**

25. Special Session

Update on FLI and LDCM

Kass Green, Alta Vista
Room 12

26. Special Session

Airborne GNSS for Photogrammetry

Mohamed Mostafa, Applanix Corporation
Richard Snay, Chris Litton, Robert Tuck, and Larry Hothem
Room 4

27. Applications of Lidar to Forestry

Moderator: Jason Tullis, University of Arkansas
Room 6

Effects of Laser Pulse Density and Interpolator on the Forest Information Extraction

Qi Chen, University of California, Berkeley
Peng Gong, Dennis Baldocchi, and Gregory Biging

Remote Sensing-assisted Decision Support for Red Oak Borer Hazard Response in Upland Oak-hickory Forests

Jason Tullis, University of Arkansas
John Wilson, Jason Defibaugh y Chávez, Fred Stephen, Melissa Fierke, and John Riggins

Damage Estimation of Wild Fire using Geo-spatial Information Technology

Joon Heo, Yonsei University, South Korea
Yeong Sun Song, Jong Hong Kim, and Jin Woo Kim

Investigating New Advances in Forest Species Classification

Lindi Quackenbush, SUNY-ESF
Yinghai Ke and Charles Kroll

28. Aquatic Vegetation Mapping

Moderator: Kimberly A. Bjorgo-Thorne, West Virginia Wesleyan College
Room 8

Comparison of Z/I's DMC Imagery vs. Traditional Analogue Film for Mapping Submerged Aquatic Vegetation in Southwest Florida

Gary Florence, Photo Science, Inc.

Analysing the Changing Floodplain of the Torsa River, India

Tanushree Biswas, Department of FRWS, College of Natural Resources, Utah State University

Douglas R. Ramsey

Spatial Data Modeling of Fish Habitat in a Large River

Kimberly A. Bjorgo-Thorne, West Virginia Wesleyan College
Michael P. Strager

Digital Orthophoto Project for Seagrass Assessment, Taylor County, Florida

Bertin Evina-Ze, Digital Aerial Solutions
Shane Nelson

29. ASTER Satellite Applications

Moderator: Ruiliang Pu, University of South Florida
Room 7

Wetland Delineation using Classification and Regression Tree (CART) and Multinomial Logistic Regression (MLR)

Eva Pantaleoni, Virginia Tech
Randolph Wynne

Spectral Mixture Analysis for Mapping Abundance of Urban Surface Components from the Terra/ASTER Data

Ruiliang Pu, University of South Florida
Peng Gong and Ryo Michishita

Mapping Small Reservoirs in Semi-arid Region Using Optical and Microwave Remote Sensing

A. K. M Hossain, University of Mississippi
Greg Easson

Monitoring Irrigation Areas using ASTER/Terra Images: Diyarbakir

Huseyin Bayraktar, Yildiz Technical University, Geodesy and Photogrammetry Division, Photogrammetry and Remote Sensing Department, Turkey

30. Classification II

Moderator: Michael K. McInerney, ERDC
Room 5

Discrete Wavelet Transform Effect on Hyperspectral Image Classification Performance using Lossless Compression Algorithms with Color and Quality Scalability under JPEG2000

Vikram Jayaram
David Negrete, Bryan Usevitch, and Vikram Jayaram

Comparison of Methodologies to Derive a Normalized Difference Thermal Index (NDTI) From ATLAS Imagery

Michael K. McInerney, U.S. Army Engineer Research Development Center (ERDC) Construction Engineering Research Laboratory (CERL)
Robert Lozar

Proximal Hyperspectral Sensing Applications for Soil Classification and Survey

E. J. Neafsey, Cornell University
Stephen DeGloria, Matt Havens, Steve Antes, and Dean Hively

Vegetation Continuous Fields (VCF) for Two Counties of Northern Utah Using LANDSAT Imagery and Ancillary Data

A. Hernandez, Utah State University – Remote Sensing and GIS Laboratories
S. Rivera and R. Ramsey

31. GIS - Modelling and Analysis

Moderator: Ibrahim Eden, *Brown University*

Room 10

Extracting 3D Structure and Appearance from Multiple Images with Application to Change Detection

David Cooper, *Brown University*

Ibrahim Eden, Joseph Mundy; Thom Pollard and Ibrahim Eden

Developing an Application for Measuring Accurate Feature Distances at Regional and Global Scales

Jeong Chang Seong, *Department of Sciences, University of West Georgia*

Jinmu Choi

32. GIS - Urban Analysis Methods

Moderator: Louis Manglass, *University of Georgia*

Room 9

GIS the Business Tool of Choice for Public Utilities

James Hunt, *Wilson/Miller Inc & Collier County*

Trevor Trinkaus and Michael Coles

Geostatistical Modelling for Assessment of Development at Micro Level

R.D. Gupta, *Civil Engineering Department, Motilal Nehru National Institute of Technology, India*

Space-time Analysis of Urban Heat Islands using MODIS Data

Rajasekar Umamaheshwaran, *Department of Geography, Geology and Anthropology, Indiana State University*

Weng Qjhao

The Efficient Use of Ancillary Cadastral Data When Mapping Residential Densities Using Photointerpretation Techniques

Michael Broker, *South Florida Water Management District*

Mark Anderson

33. High Resolution Satellite Imagery and 3D Surface Models

Moderator: Jennifer Whitacre, *eMap International*

Room 11

Comparative Analysis of Alternative Methodologies for True Ortho-photo Generation from High Resolution Satellite Imagery

Ayman Habib, *Department of Geomatics Engineering, University of Calgary, Canada*

Ki-In Bang, Changjae Kim and Sung-Woong Shin

Digital Surface Models in Build Up Areas Based on Very High Resolution Space Images

Gurcan Buyuksalih, *Zonguldak Karaelmas University, Turkey*

Karsten Jacobsen

Automatic 3D Building Reconstruction from Stereo Ikonos images

Zhen Xiong, *University of New Brunswick, Canada*

Zhang Yun

Investigation of Geometric Accuracy and Feature Compilation of High Resolution Satellite Imagery

Orhan Altan, *Istanbul Technical University, Faculty of Civil Engineering, Department of Geodesy and Photogrammetry, Turkey*

Veysel Okan Atak

34. Web Services and Data Storage

Moderator: Chris Garrard, *Utah State University*

Room 2

Implementing the Commercial Remote Sensing Space Policy

Elizabeth McCartney, *SAIC, U.S. Geological Survey/EROS*

Julia Deis, Jeff Danielson, and Brenda Ellis

Merging Enterprise Data with Web Portals & Non-GIS Applications

Kenyon Waugh, *Valtus Imagery Services*

Methods and Software for Building Spatially-oriented Web Applications

Chris Garrard, *Utah State University*

R. Douglas Ramsey

Exhibitors' Reception

Grand Ballroom & Foyer

Wednesday, May 9, 5:30 pm to 7:00 pm.

- ⚙ View the many products and services offered by the world wide suppliers and your hosts for the evening.
- ⚙ Meet old friends and make new ones at this great networking event.
- ⚙ Enjoy light hors d' oeuvres and beverages.

Thursday, May 10th			
Time	Event	Room	Attending
7:00 am to 5:00 pm	Registration	Level Two	
7:00 am to 8:00 am	Past Presidents' Breakfast	Room 3	
8:00 am to 5:00 pm	Poster Display	Florida Ballroom Foyer	
8:00 am to 9:00 am	General Session & ASPRS Awards Presentation	Florida Ballroom	
9:15 am to 10:45 pm	Panel Discussion — Trends in Digital Aerial Imaging: Part B	Room 4	
9:15 am to 10:45 pm	Special Session — Wetland Mapping/Assessment with Thermal Sensors	Room 12	
9:15 am to 10:45 pm	Technical Sessions 36-45	See individual session description	
10:00 am to 5:00 pm	Exhibit Hall	Grand Ballroom & Foyer	
10:45 am to 11:00 am	Exhibit Hall Beverage Break	Grand Ballroom & Foyer	
11:00 am to 12 noon	Interactive Networking Hot Topics— The Landsat Data Continuity Mission	Room 1	
11:00 am to 12 noon	Interactive Networking Hot Topics — Geo-object-Based Image Analysis	Florida Ballroom Salon I	
11:00 am to 12 noon	Student Advisory Council (SAC) Meeting	Room 3	
12:15 pm to 1:15 pm	Memorial Address and Student/Region Awards	Florida Ballroom VI	
1:30 pm to 3:00 pm	Panel Discussion — Airborne Digital Mapping Camera Systems	Room 4	
1:30 pm to 3:00 pm	Special Session — Imagery and Geospatial Data in Disaster Response 1	Room 1	
1:30 pm to 3:00 pm	Special Session — Mapping the Great Wall of China	Room 9	
1:30 pm to 3:00 pm	Technical Sessions 50-57	See individual session description	
3:00 pm to 3:30 pm	Exhibit Hall Beverage Break	Grand Ballroom & Foyer	
3:30 pm to 5:00 pm	Special Session — Direct Georeferencing	Room 12	
3:30 pm to 5:00 pm	Special Session — Imagery and Geospatial Data in Disaster Response 2	Room 1	
3:30 pm to 5:00 pm	Special Session — Re-engineering the National Spatial Data Infrastructure (NSDI); North American Metadata Profile, Geospatial Line of Business	Room 4	
3:30 pm to 5:00 pm	Technical Sessions 61-69	See individual session description	
6:00 pm to 9:00 pm	An Evening at the Florida Aquarium	Florida Aquarium	

Registration Desk

7:00 am to 5:00 pm

Exhibit Hall

10:00 am to 5:00 pm
Grand Ballroom & Foyer

Past Presidents' Breakfast

7:00 am to 8:00 am

Room 3

General Session

8:00 am to 9:00 am

Florida Ballroom

Jack H. Dunnigan

"Linking Geospatial Solutions to Societal Benefits – NOAA's 200 Years of Experience"

For 200 years NOAA has led in the application of geospatial technologies to meet societal needs in the United States. From NOAA's inception in 1807, by providing nautical charts to insure safe passage into American ports, to today where NOAA provides Harmful Algal Bloom Forecasts to support fishery and tourism industries. Dunnigan, NOAA's Assistant Administrator for Ocean Services and Coastal Zone Management, will cover NOAA's geospatial solutions that provide benefits at all levels from global to local.



Jack H. Dunnigan is NOAA's Assistant Administrator for Oceans and Coastal Services, responsible for the overall execution of activities in NOAA's National Ocean Service (NOS). NOS is one of the Nation's premier institutions in marine navigation, operational oceanography and geopositioning, and marine and coastal management and science. Dunnigan previously served as NOAA's Ecosystem Goal Team Lead, responsible for planning, programming and overall coordination across NOAA of its nine ecosystem goal programs. He lead NOAA's efforts to move forward in the utilization of ecosystem approaches to management of ocean and coastal resources. In addition to these responsibilities, Dunnigan served as Director of NOAA's Office of Sustainable Fisheries, providing national coordination and oversight of the agency's fisheries conservation and management policy and activities. In total Dunnigan has over 20 years of service within NOAA. He served for 11 years as the Executive Director of the Atlantic States Marine Fisheries Commission, building coalitions among member states to develop and implement mutual conservation programs for shared coastal and marine fishery resources. He has served in a leadership role on the staff of the NOAA Office of General Counsel and the New England Fishery Management Council.

Marguerite Madden, Ph.D.

Associate Professor and Director
Center for Remote Sensing and Mapping
Science (CRMS)
Department of Geography
The University of Georgia

"ASPRS: The Leader in GIScience and Technology for All"

Every year there is a rotation of industry, government and academia with the incoming President of ASPRS. During the past two years I have had the privilege of working with two women, Karen Shuckman and Kari Craun, who have brought their perspectives and experience in industry and government, respectively, to the office of ASPRS President. In 2008, I will work closely with Kass Green who will draw on her career as a major player in the geospatial industry. This year I will have the honor of taking my place as President within this historical cohort of women officers.



As the representative from academia, the goals for my term focus on opportunities and advancements for students within our Society. The key to the success and future of our Society lies with young men and women who are drawn to geospatial techniques, concepts and theories. Positive results of membership promotion between 2005 and 2006 include an increase in student members in 10 of the 17 regions. The year also saw the establishment of three new ASPRS Student Chapters at the University of Georgia, University of Oregon and the University of Utah.

I hope to accomplish my Presidential goal to enhance the value of ASPRS to students by: 1) improving communication and networking opportunities among students; 2) bringing down barriers to student travel to ASPRS conferences; 3) enhancing student activities at regional and annual conferences; and 4) promoting the endowment of student awards. I have worked with ASPRS staff to improve electronic communication between students and ASPRS Headquarters. Last year saw the creation of the Student Advisory Council, headed by students, and a new electronic ASPRS Student Newsletter that debuted Fall 2006 and is awaiting a student-determined name.

This year promises to be a very rewarding and busy year for me. I am extremely thankful to the ASPRS membership for giving me this opportunity and I look forward to meeting you all, new and old friends alike, at Tampa 2007: Identifying Geospatial Solutions.

Marguerite Madden is the Director of the Center for Remote Sensing and Mapping Science (CRMS) and Associate Professor in the Department of Geography at the University of Georgia.

A member of ASPRS since 1984, Madden has participated in ASPRS Conferences as a presenter and exhibitor of desktop mapping software. She has served ASPRS as the GIS Division Assistant Director (2000 to 2002), GIS Division Director (2002 to 2004) and Technical Co-chair for the ASPRS Fall 2004 Conference. She is the ASPRS delegate to the University Consortium of Geographic Information Science and the ASPRS Correspondent for International Society for Photogrammetry and Remote Sensing (ISPRS) Commission IV. This year she began work as Editor-in-Chief of the ASPRS *Manual of GIS*.

Madden has had extensive involvement in ISPRS, serving as Secretary of Commission IV Working Groups 5 from 1988 to 1992 and WG IV/2 from 1996 to 2000. She was the Secretary of Commission IV from 1992 to 1996 and Chair and Co-chair of WG IV/6 and IV/4, from 2000 to 2004 and 2004 to 2008. She served as an Associate Editor of the *ISPRS Journal of Photogrammetry and Remote Sensing* (2004-2005) and Co-guest Editor for three Special Issues of the *ISPRS Journal*.

She received her BA and MA degrees in Biology from the State University of New York in 1979 and 1984, respectively, and her PhD in Ecology from The University of Georgia in 1990.

ASPRS Awards

ASPRS Fellows Awards

Russel G. Congalton, Alan M. Mikuni, Nancy K. Tubbs

Conference Management Awards

Gary Florence, Bon DeWitt

Technical Sessions

9:15 am to 10:45 am

35. Panel Discussion

Trends in Digital Aerial Imaging: Part B

Jon Christopherson, *U.S. Geological Survey*

Room 4

36. Geospatial Education, Materials and Facilities

Moderator: Kathleen Peila, *Notre Dame de Namur University*

Room 1

GIS on Campus

Kathleen Peila, *Notre Dame de Namur University*

Neil Marshall

Remote Sensing Educational Opportunities Available through WyomingView

Ramesh Sivanpillai, *University of Wyoming*

Kenneth L. Driese

37. Classification Algorithm Development

Moderator: George T. Raber, *The University of Southern Mississippi*

Room 5

Forest Species Classification and Tree Crown Delineation using QuickBird Imagery

Yinghai Ke, *SUNY-College of Environmental Science and Forestry*

Lindi Quackenbush and Charles Kroll

Automatic Feature Attribution Utilizing High Level Sensor Fusion of Hyperspectral and Lidar Data

George T. Raber, *The University of Southern Mississippi*

A Comparative Analysis of Object Oriented Classification Methods for Mapping Benthic Habitat from Digital Airborne Data

Kass Green, *Alta Vista*

C. Lopez

38. Classification and Positional Accuracy Assessment

Moderator: John Lowry, *Utah State University*

Room 6

Assessing the Accuracy of Wetland Delineations

Mehmet Yavuz, *Syracuse University*

Accuracy Assessment of Land-cover Classification in Lamjung District, Nepal

Milan Shrestha, *University of Georgia*

An Ecological Framework for Fuzzy Set Accuracy Assessment of Remote Sensing-based Land-cover Maps

John Lowry, *RS/GIS Laboratory, Utah State University*

Lisa Stoner, Douglas Ramsey, Jessica Kirby, and Keith Shulz

A Monte Carlo Simulation of the Impact of Sample Size and Percentile Method Implementation on Imagery Geolocation Accuracy Assessments

Paul Bresnahan, *Observera, Inc.*

Todd Jamison

39. Close Range Photogrammetry

Moderator: Donn Liddle, *NASA*

Room 8

Close Range Analytical Photogrammetry by Computer: Forensic Applications

Nicole A. Spaun, *Federal Bureau of Investigation*

Developments in Digital Close-range Photogrammetry

Clive Fraser, *Department of Geomatics, University of Melbourne, Australia*

Simon Cronk

Application of Stereo Photogrammetry for Analysis of Space Shuttle External Tank Damage

Donn Liddle, *Image Science and Analysis Group, Johnson Space Center, NASA*

Ed Oshel

40. Data Fusion I

Moderator: Don Light, *Rochester Institute of Technology*

Room 10

Segment Based Image Analysis and Image Fusion

Manfred Ehlers, *IGF, University of Osnabrueck, Germany*

D. Tomowski, A. Greiwe

Ontology-supported Automatic Service Chaining for Geospatial Knowledge Discovery

Liping Di, *Center for Spatial Information Science and Systems (CSISS), George Mason University*

Peng Yue, Wenli Yang, and Genong Yu

Panchromatic Enhanced Super-resolution of Multi-spectral Imagery

Ronald Riley, *Harris Corporation*

Morris Akbari, Tariq Bakir, Camille Merrell, and Josef Allen

41. Data Smoothing and Filtering

Moderator: Jennifer Klassen, *University of Calgary, Canada*

Room 7

Minding the Gap: A Review of Methods for Addressing Missing Data Values within Images for Time Series Analysis

Zachary Christman, *Clark University Graduate School of Geography*

Remote Sensing of Vegetation Phenology: Smoothing Strategies for NDVI Time Series

Jennifer Klassen, *Foothills Facility for Remote Sensing and GI Science, Department of Geography, University of Calgary, Canada*

Greg McDermid

Partial Unmixing of Hyperspectral Imagery: Theory and Methods

David R. Streutker, *Idaho State University*

Jacob Mundt and Nancy F Glenn

42. DEM — Accuracy Assessment II

Moderator: Ricardo M. Passini, *BAE Systems*

Room 9

Influence of Various Parameters on the Accuracy of Lidar Generated Products for Highway Design Applications

John Ray, *The Ohio State University*

Eva Paska

Overall and Temporal Variability in Horizontal Accuracy of Lidar Data

Michael Hodgson, *University of South Carolina*

John Jensen, María García-Quijano, and Lewis Lapine

Accuracy Analysis of SRTM Height Models

Ricardo M. Passini, *BAE Systems*

Karsten Jacobsen

43. Geometric Processing of Satellite Imagery

Moderator: Chunsun Zhang, *South Dakota State University*

Room 2

Geometric Calibration and Orthorectification of Bilsat-1 Imagery

Ali Özgün Ok, *Middle East Technical University (METU), Turkey*

Mustafa Türker

Orientation of High Resolution Optical Space Images

Karsten Jacobsen, *University of Hannover, Germany*

Terrain Deformation Modeling by Photogrammetric Exploitation of IKONOS Imagery

Chunsun Zhang, *South Dakota State University*

44. GIS Analysis in Water Resource Areas

Moderator: Shawana Johnson, *Global Marketing Insights*

Room 13

GIS Modeling of Riparian Zones Utilizing Digital Elevation Models and Flood Height Data: An Intelligent Approach

Lacey Mason, *Michigan Technological University*

Ann Maclean

Reproducing Watershed Analysis Results using ArcHydro Tools with Lidar-based Terrain Data in Southwest Florida

Brian McKay, *Ardaman and Associates, Inc.*

Tim Coulombe

Seamless Integration of Coastal Geo-spatial Data Supported by a 3-D Visualization and Spatial Analysis System

Ron Li, *The Ohio State University*

Keith Bedford, Xutong Niu, Feng Zhou, Sagar Deshpande, and Vasilias Velissariou

Network Analysis of Historical Airboat Trails in Everglades National Park

Louis Manglass, *Center for Remote Sensing and Mapping Science*

Thomas Jordan and Marguerite Madden

45. Hurricane Damage Assessment

Moderator: Don Vogler, *Chicksaw Indian Industries*

Room 11

Hurricane Damage Assessment using Remote Sensing Techniques: A Case Study in New Orleans

Jae Sung Kim, *Geomatics Engineering, School of Civil Engineering, Purdue University*

Jie Shan

Predicting Flood Hazard Areas: a SWAT and HEC-RAS Simulations Conducted in River Aguán Basin of Honduras, Central America

A. Hernandez, *Utah State University, RS/GIS Laboratories*

A. Rivera, G. Suarez, and Douglas Ramsey

Impact of Scale of Analysis on Property Loss Estimation in Florida: A Comparative Approach

Bandana Kar, *Department of Geography, University of South Carolina*

Michael E. Hodgson

46. Special Session

Wetland Mapping/Assessment with Thermal Sensors

Moderator: Charles E. Olson, Jr., *University of Michigan*

Room 12

Applications of Airborne Thermography at St. John's Water Management District

Jeffrey B. Davis, *St. John's River Water Management District*

Applications of Thermal Infrared for Spring, Seep and Wetland Assessment

Thomas R. Ory, *Argon ST*

Integration of Thermal Remote Sensing Data for Wetlands Mapping in Michigan: An object-based approach

Richard B. Powell, *Michigan Technological University Research Institute*

Colin N. Brooks, David Schaub, and Lucas P. Spaete

Exhibit Hall Beverage Break

10:45 am to 11:00 am

Grand Ballroom & Foyer

Interactive Networking – Hot Topics

11:00 am to 12:00 noon

See page 9 for details

The Landsat Data Continuity Mission (LDCM) (Room 1)

Geo-Object-Based Image Analysis (Florida Ballroom Salon I)

Student Advisory Council (SAC) Meeting

Room 3

11:00 am to 12:00 noon

Memorial Address and Student/Region Awards

Florida Ballroom VI

12:15 pm to 1:15 pm

This year's Memorial Address will feature the life and achievements of Ta Liang, presented by Warren Phillipson.

This gathering affords everyone an opportunity to remember the great accomplishment of the industry pioneers and a chance to learn how they continue to impact our world today as well as acknowledging our leaders of tomorrow with the presentation of the Student Awards. Tickets are not required.

Ta Liang was a pioneer in aerial photographic interpretation. His research resulted in seminal reports that became standard references for recognizing and assessing landforms, landslides and tropical soils. In addition to being one of the world's foremost airphoto interpreters of engineering soil and rock properties, he was a skilled civil engineer, who was awarded the U.S. Emblem for Meritorious Civilian Service during World War II; a consultant to national



Ta was an emeritus member of ASPRS, who served as president and national director of the Central New York Region, chaired national committees, and never missed a regional or national meeting. His memory is honored through the ASPRS Foundation's "Ta Liang Memorial Award," which, since 1989, has annually provided support for research-related travel by the selected remote sensing graduate student.

Presenter:

Warren Phillipson is a senior scientist, currently deployed to the National Intelligence Council of the Office of the Director of National Intelligence. He was associated with Cornell University for 30 years; for nearly 25 of those years, he was a student, employee and colleague of Ta Liang. At Cornell, Phillipson received his BCE, MS (Photogrammetry) and PhD (Soil Science), co-directed or directed the Remote Sensing Program, established the inter-college Cornell Laboratory for Environmental Applications of Remote Sensing, taught, advised, conducted research for NASA, EPA, USDA, USDI and others, supported many of Ta Liang's consulting projects, and consulted on UN and other efforts. In 1990, he left Cornell as a professor of remote sensing to pursue research interests with the federal government. Phillipson is an emeritus and fellow member of ASPRS, who has served the society in various capacities -- national director, member of the executive committee, member and chairman of national committees, region president, and editor of the *Manual of Photographic Interpretation*, 2nd edition.

"...extraordinary human being, whose warmth, quiet strength, and approach to life were imprinted on the many people he so deeply touched."

and international government and industrial organizations, who demonstrated the value and methods of airphoto analysis/remote sensing through projects in some 40 countries; and an outstanding teacher and advisor, who left China to spend the second half of his life at Cornell University, where he earned his MCE and PhD, joined the Civil Engineering faculty and became a professor, led Cornell's evolution from "Aerial Photographic Studies" to "Remote Sensing," and influenced hundreds of students from the U.S. and around the world. Ta was an extraordinary human being, whose warmth, quiet strength, and approach to life were imprinted on the many people he so deeply touched.

Presidential Citations

Mary Clinthorne, Perry Hardin, Dr. Rakesh Malhotra, Dr. Albert Barnett, Paul Brooks, and Randy Olsen

Region of the Year

First Place: **The Columbia River Region**

First Honorable Mention: Tie: **The Eastern Great Lakes and The Rocky**

Mountain Regions

Second Honorable Mention: Tie: **The Central New York and Central**

Regions

Region Newsletter

First Place: **Wavelengths Columbia River Region**

Second Place: **The Central Region Newsletter**

Third Place: **Rocky Mountain Compiler**

Region Website

First Place: **Eastern Great Lakes Region**

Second Place: **Rocky Mountain Region**

Third Place: **Alaska Region**

ASPRS Student Travel Grants

Jonathan B. Thayn

Bandana Kar

Technical Sessions

1:30 pm to 3:00 pm

47. Panel Discussion

Room 4

Airborne Digital Mapping Camera Systems

Brian Huberty, *U.S. Fish & Wildlife Service*

Panelists:

Peter Fricker, *Leica Geosystems*

Julien Losseau, *DIMAC*

Dave Fuhr, *Airborne Data Systems*

Franz Liberl, *Vexcel/Microsoft*

Joe Hutton, *Applanix*

Klaus Neuman, *Intergraph*

Sven Knuth, *Jena-Optronik*

48. Special Session

Imagery and Geospatial Data in Disaster Response 1

Kari Craun, *U.S. Geological Survey*

Room 1

49. Special Session

Mapping the Great Wall of China

Chen Jun, *NSDI, China*

Room 9

50. Hyperspectral Scanners and Photogrammetry in GIS

Moderator: Stefan A. Robila, *Montclair State University*

Room 12

An Efficient 3D GIS Data Extraction Method with Digital Photogrammetry Technology in Arid Area

Yongping Zhao, *Kuwait Institute for Scientific Research, Kuwait*

Amani Al Othman, Hanan Alhashash, and Mostafa Kawiani

New Developments in Target Detection in Hyperspectral Imagery using Spectral Metrics and Spectra Extraction

Stefan A. Robila, *Montclair State University*

Integration of Traditional Land Surveying Techniques, GIS & GPS to Facilitate the Location of Historical Gold Mine Locations in Greenville, Plumas County, California

Anthony Richard Vannozi, *School of Forest Resources, College of Natural Sciences, Forestry, and Agriculture, University of Maine*

Hyperion Level 1Gst Systematic Terrain-corrected Data Product Available from Earth Observing-1 (EO-1)

Pamela J. Van Zee, *Science Applications International Corporation*

Jeffrey J. Danielson and Pamela J. Van Zee

51. Lidar — Forestry and Habitat

Moderator: Sorin Popescu, *Texas A&M University*

Room 8

Mapping Aboveground Forest Biomass with Lidar: From Individual Trees to Local Scale Maps with Uncertainty Estimates

Sorin Popescu, *Texas A&M University, Dept. of Forest Science*

Kaiguang Zhao

Lidar and Multispectral Imagery for Red-cockaded Woodpecker (*Picoides borealis*) Habitat Assessment

Joelle Carney, *Mississippi State University*

Alexis Londo, David Evans, and Scott Tweddale

Integration of Airborne Profiling Lasers with Scanning Lidar Data for Regional Forest Biomass Estimation

Kaiguang Zhao, *Texas A&M University, Dept. of Forest Science*

Sorin Popescu and Ross Nelson

Digital Surface Model of Tree Canopy Structure from Lidar Data through Implicit Surface Reconstruction.

Akira Kato, *University of Washington*

Gerard Schreuder, Donna Calhoun, Peter Schiess, and Werner Stuetzle

52. Natural Catastrophe Assessment

Moderator: Dennis Jacobs, *USDA Forest Service*

Room 10

Forest Inventory and Catastrophic Events: Historic Geospatial Assessments

Dennis Jacobs, *U.S. Department of Agriculture Forest Service*

Salajanu Dumitru

Image Driven Data Mining in Tsunami and Hurricane High Resolution Satellite Imagery

Christopher F. Barnes, *Georgia Institute of Technology*

Hermann Fritz and Jeseon Yoo

Integration of Logistic Regression and Genetic Programming to Model Coastal Louisiana Land Loss Using Remote Sensing

Henrique Momm, *The University of Mississippi*

Greg Easson and Joel Kuszmaul

Assessing Hurricane Katrina Vegetation Damage at Stennis Space Center using IKONOS Image Classification Techniques

J. Spruce, *Science Systems and Applications, Inc.*

K.W. Ross and Bill Graham

53. Photogrammetric Digital Camera Accuracy

Moderator: Stewart Walker, *BAE Systems*

Room 2

On The Accuracy of Push Broom Aerial Digital Camera

A. Qassim Abdullah, *EarthData International, Inc.*

New Approaches to Triangulation of Leica ADS40 Imagery within a Universal Triangulation Framework

Stewart Walker, *BAE Systems*

Fidel Paderes and Kurt DeVenecia

Geometry of Digital Frame Cameras

Karsten Jacobsen, *University of Hannover, Germany*

54. Pre-College Education Issues

Room 7

Environmental Education and the Construction of a Statewide Lichen Database for Georgia using GPS and GIS Technology

Thomas R. Jordan, *University of Georgia*

Robert J. Hill

Geospatial Technologies in K-12 within the U.S.

S. Hovey, *S.T Hovey Consulting*

55. Project Management and Education Curriculum Issue

Moderator: Jaymes Pardue, *Infotech Enterprises America*

Room 6

Geospatial Training at the National Geospatial-Intelligence Agency

Michael Noderer, *National Geospatial-Intelligence College*

The Project Management Professional (PMP) in the Geospatial Industry

Raquel Charrois, *EarthData International Inc.*

The Art of the Geospatial Consortium - Building Consensus in Public and Private Business Environments

Jaymes Pardue, *Infotech Enterprises America; Los Angeles County*

56. Remote Sensing and GIS Techniques

Moderator: Alexander Hernandez, *Utah State University*

Room 5

Boundary Land Cover Mapping: Merging Medium and High Resolution Imagery to Produce Large Area Land Cover Maps

Steven Lennartz, *Sanborn*

Michael Palmer and Andrew Brenner

Mining Landsat TM Imagery for Species Invasion Patterns

Nicholas Clinton, *University of California*

Zhenyu Jin, Peng Gong, and Bing Xu

Predicting the Occurrence of Pine Bark Beetle (*Dendroctonus spp.*) Outbreaks in Honduras using Logistic Regression and Remotely-Sensed Derived Data

Alexander Hernandez, *RS/GIS Laboratories - Utah State University*

R.Douglas Ramsey and Samuel Rivera

57. Vegetation Mapping: Change Detection

Moderator: Teresa Howard, *The University of Texas–Austin*

Room 11

Estimation of Leaf Biomass by Ecoregion and Land Cover Class for Air Quality Modeling in Texas

Teresa Howard, *The University of Texas at Austin Center for Space Research*

Gayla Mullins

Variance as a Geospatial Analysis Tool

Paula Smit, *Raytheon IIS*

A Framework for Riparian Zone Monitoring in Australian Tropical Savannas Based on Field Survey Data and High Spatial Resolution Imagery

Kasper Johansen, *Centre for Remote Sensing and Spatial Information Science, Australia*

Stuart Phinn, John Lowry, Ian Dixon, and Michael Douglas

Exhibit Hall Beverage Break

3:00 pm to 3:30 pm

Grand Ballroom & Foyer

Technical Sessions

3:30 pm to 5:00 pm

58. Special Session

Direct Georeferencing

Mohamed Mostafa, *Applanix Corporation*

Larry Hothem, Joe Hutton, Chris Parrish, and George Hofmann

Room 12

59. Special Session

Imagery and Geospatial Data in Disaster Response 2

Kari Craun, *U.S. Geological Survey*

Room 1

60. Special Session

Re-engineering the National Spatial Data Infrastructure (NSDI); North American Metadata Profile, Geospatial Line of Business

Moderator: Alan Stevens, International Program Manager, *Federal Geographic Data Committee (FGDC) Secretariat*

Special session, sponsored by the Federal Geographic Data Committee

Room 4

A Bold New Look at the National Spatial Data Infrastructure

Ivan DeLoatch, *FGDC*

Leslie Armstrong and Alan Stevens

ISO 19115 Metadata and the North American Profile

David Danko, *ESRI*

Geospatial Capabilities in an Enterprise Architecture

Leslie Armstrong, *FGDC*

Douglas Nebert

61. Classification Techniques

Moderator: Mark Brooks, *Optimal Geomatics*

Room 13

Spectral-spatial Cross-correlation for Change Detection — A Case Study for Citrus coverage Change detection

Zhengwei Yang, *United States Department of Agriculture, National Agriculture Statistics Services*

Rick Mueller

The Florida Cropland Data Layer: A See5 Implementation

Claire Boryan, *U.S. Department of Agriculture, National Agricultural Statistics Service*

62. Data Fusion II

Moderator: Steve Brenner, *Aviterra Geospatial*

Room 10

Vector GIS Error Models: Refinements and Applications for Data Fusion

Kimberly Love, *Virginia Tech*

Stephen Prisley and Renato Follo, Jr.

Geospatial Enablement of a Text Database Through Service-oriented Architecture

Robert Michael, *Northrop Grumman Corporation*

John Leffler Kastanowski

63. Data Fusion Techniques

Moderator: Tommy Jordan, *University of Georgia*
Room 5

Surface Lithology, Vegetation, and Tephra Characterization using a Combined Analysis of Optical and Radar Imagery

Marius Necsoiu, *Southwest Research Institute*
Donald Hooper and Roland Benke

Kentucky's Temporal Land Cover Change Analysis, 1990-2001 and 2001-2005; Different Methods, Different Answers

Demetrio Zourarakis, *Kentucky Division of Geographic Information*
Michael Palmer and Andrew Brenner

Mapping Hydrothermal Minerals in the Uzon Caldera, Kamchatka using ASTER and QuickBird Images

Scott Baker, *University of Georgia*
Thomas R. Jordan and Douglas Crowe

Community-based Disaster Response Design using an Open Source GIS

Jennifer Lambert, *Humboldt State University*
Kenyatta Perkins

64. DEM – Coastal and Bathymetric Applications

Moderator: Amar Nayegandhi, *USGS*
Room 9

Delineating Coastal Vegetation Communities using Waveform-Resolving Lidar and Multi-spectral Imagery

Amar Nayegandhi, *ETI Professionals/U.S. Geological Survey*
John C. Brock and C. Wayne Wright

Eliminating Slope Bias from Rugosity Calculations Derived from Lid

Jeremy Bracone, *ETI Professionals/U.S. Geological Survey*
John Brock

Using Nautical Charts to Visualize 19th Century Channel Change on the St. Mary's River, Sault Ste. Marie, Canada and U.S.A.

Louise Buck, *Department of Geography, University of Western Ontario, Canada*
Philip J. Stooke

Role of Man-made Barriers in Storm Surge Mitigation

Melissa Gartman, *NVision Solutions, Inc.*
Kelly Boyd and Joel Herr

65. Forestry Mapping

Moderator: Shawana Johnson, *Global Marketing Insights*
Room 7

Quality Assurance of Industrialized Timber Inventory GIS using Multi-temporal Landsat Images, SRTM, and NED

Joon Heo, *Yonsei University, South Korea*
Ji Sang Park, Jong Hong Kim, and Hong-Gyoo Sohn

Modelling Mediterranean Forest Productivity using Envisat MERIS Data Set

Cenk Donmez, *Cukurova University, Landscape Architecture, Turkey*
Suha Berberoglu

Detection of Vegetation Stress in DeSoto National Forest, Mississippi, Following Hurricane Katrina

George Raber, *The University of Southern Mississippi*
Jerry Griffith, Sam Jackson, and Mark Graves

66. Hydrological Applications

Moderator: Jeff Liedtke, *eMap International*
Room 2

Extracting Impervious Surface using Spectral Mixture Analysis with Multi-temporal ASTER images

Hu Xuefei, *Department of Geography, Indiana State University*
Weng Qihao

Quantitative Assessment of the Accuracy of Spatial Estimation of Impervious Cover

Anna Chabaeva, *University of Connecticut, Department of Natural Resources Management and Engineering*
Daniel Civco and James Hurd

A Comparative Study of Global DEM Data for Hydrological Investigation in Mahanadi Basin of India

Amit Bhattacharya, *Indian Institute of Technology*
P. Srivastava

All Impervious Surface Maps Are Not Created Equally

Jeff Liedtke, *eMap International*
Kumar Navulur

67. Integration of Photogrammetry and Lidar

Moderator: David Nale, *eMap International*
Room 6

Integrating High Resolution Digital Imagery and Lidar for Local Government

Jaymes Pardue, *Infotech Enterprises America; Los Angeles County*
Nick Franchino

Integration of Photogrammetric and Lidar Data in a Multi-primitive Triangulation Procedure

Ayman Habib, *Department of Geomatics Engineering, University of Calgary, Canada*
Katrinn Zorn, Sungwong Shin, and Changjae Kim

Does State-of-the-Art Equipment Solve All Mapping Problems? A Case Study of the Los Angeles Regional Imagery Acquisition Consortium (LAR-IAC) Project

Gerhard Sehnalek, *Infotech Enterprises America, Inc.*
Nick Franchino

68. Lidar/SAR – Application Processing Methods

Moderator: Bingcai Zhang, *BAE Systems*
Room 11

City Modeling and Complex Building Shape Reconstruction from Airborne Lidar Data

Yerach Doytsher, *Department of Transportation and Geo-Information Engineering, Israel*
Nizar Abo Akel, Sagi Filin and Yerach Doytsher

Automatic Building Extraction from Lidar Data

Charalambos Poullis, *IMSC/University of Southern California*
Suya You and Ulrich Neumann

A Graphically Based SAR Image Simulator

Jim Bethel, *Purdue University*
Anthony Squellati

Next Generation Automatic Terrain Extraction (NGATE) using Microsoft/Vexcel Ultracam Imagery

Bingcai Zhang, *BAE Systems*
Scott Miller, Stewart Walker, and Kurt de Venecia

69. MODIS Satellite Mapper

Moderator: Melvin Tucker, *ASRC Management Systems*

Room 8

Correlating Vegetation Growth Anomalies with Occurrences Such as Fire and Insect Infestation in Yosemite National Park using MODIS FPAR Data

Matthew Voss, *NASA - DEVELOP*

Issac Wilson, Siddhartha Oza, Allison Suarez, Allison Husby, and Cindy Schmidt

A Scaling Solution: Calibrating Local Lidar-derived Forest Canopy Parameters with Regional MODIS Products

Sorin Popescu, *Texas A&M University*

Alicia Rutledge

Drought Monitoring of South Carolina using MODIS and TRMM Data

Jinyoung Rhee, *University of South Carolina*

Jungho Im and Greg Carbone

An Evening at the Florida Aquarium

6:00 pm to 9:00 pm

For an unforgettable experience, plan on an Evening at the Florida Aquarium. You will see why it's among the top aquariums in the world with over 10,000 aquatic plants and animals, including sharks, otters, gators, free-flying birds, and exotic sea dragons. Couple all of this with an opportunity to mingle with your fellow attendees while enjoying delicious refreshments and live music makes it an evening to remember.



The admission for this event is included for those paying full registration fees. Other conference registrants may purchase tickets for \$65 each when registering. Tickets for children under 12 may be purchased for \$20. Children over 12 must have a full price ticket. A limited number of on-site tickets will be available at the ASPRS Registration Desk until 12 noon on Tuesday, May 7. Everyone attending this event must have a ticket. Tickets will not be sold at the Aquarium.

(The aquarium is a short walk from the Marriott Waterside Hotel along Channelside Drive. The hotel staff will offer directions. Limited bus transportation will be provided throughout the evening starting at 5:45 pm. The buses will load at the hotel front entrance.)

SAVE THE DATES!

ASPRS 2007 Fall Specialty Conference

Co-Sponsored by Canadian Remote Sensing Society, a constituent society of the Canadian Aeronautics and Space Institute (CRSS/CASI)

October 28 - November 1, 2007

Westin Hotel

Ottawa, Canada

ASPRS 2008 Annual Conference

Oregon Convention Center/Doubletree Hotel Lloyd Center
Portland Oregon

April 27 - May 2, 2008

ASPRS 2008 Fall Conference

The William T. Pecora Memorial Symposium

Adams Mark Hotel

Denver, Colorado

November 17-20, 2008

ASPRS 2009 Annual Conference

75th Anniversary of ASPRS

Baltimore Marriott Waterfront Hotel

Baltimore, Maryland

March 8 - 13, 2009

ASPRS/MAPPS 2009 Fall Conference

Crowne Plaza Hotel

San Antonio, Texas

November 16 - 19, 2009

ASPRS 2010 Annual Conference

Town and Country Hotel

San Diego, California

April 26-30, 2010

Friday, May 11 th			
Time	Event	Room	Attending
7:00 am to 1:00 pm	Registration	Second Floor	
7:00 am to 8:00 am	Exhibitor's Breakfast	Room 13	
7:30 am to 8:15 am	ASPRS Board Breakfast	Room 11	
8:00 am to 9:00 am	Sustaining Members' Council Meeting	Room 13	
8:30 am to 5:00 pm	ASPRS Board Meeting	Room 12	
8:00 am to 1:00 pm	Poster Display	Florida Ballroom Foyer	
8:00 am to 9:30 pm	Panel Discussion — IFSAR Digital Elevation Data Acquisition/Processing Flow: A User's Guide	Room 4	
8:00 am to 9:30 pm	Special Session — Applications of Bathymetric and Topographic Lidar to Surveying and Mapping Problems in the Littoral Zone	Room 1	
8:00 am to 9:30 pm	Special Session — Applications of Aerial Thermography	Room 10	
8:00 am to 9:30 pm	Technical Sessions 72-80	See individual session description	
9:30 am to 1:00 pm	Exhibit Hall	Grand Ballroom & Foyer	
9:30 am to 10:00 am	Exhibit Hall Beverage Break	Grand Ballroom & Foyer	
10:00 am to 11:30 am	Panel Discussion — Lidar Digital Elevation Data Acquisition/Processing Flow: A User's Perspective	Room 4	
10:00 am to 11:30 am	Panel Discussion — Beyond Depth — Emerging Techniques in Active/Passive Data Fusion -and- Anticipated New Bathymetric Systems	Room 1	
10:00 am to 11:30 am	Technical Sessions 84-92	See individual session description	
12:30 pm to 2:00 pm	Technical Sessions 93-99	See individual session description	

Exhibitors' Breakfast

7:00 am to 8:00 am

Room 13

ASPRS Board Breakfast

7:30 am to 8:15 am

Room 11

Sustaining Members' Council Meeting

8:00 am to 9:00 am

Room 13

ASPRS Board Meeting

8:30 am to 5:00 pm

Room 12

Exhibit Hall

9:30 am to 1:00 pm

Grand Ballroom & Foyer

Technical Sessions

8:00 am to 9:30 am

70. Panel Discussion: IFSAR Digital Elevation Data Acquisition/Processing Flow: A User's Guide

Room 4

IFSAR Digital Elevation Data Acquisition/Processing Flow: A User's Perspective

Robert Eadie, *Intermap Technologies, Inc.*

71. Special Session

Room 1

Applications of Bathymetric and Topographic Lidar to Surveying and Mapping Problems in the Littoral Zone

Bob Pope, *U.S. Navy*

72. Coastal Mapping

Moderator: Keith Patterson, *Avineon, Inc.*

Room 6

Multiple Baseline Radar Interferometry Applied to Coastal Land-cover Classification and Change Analysis

Elijah Ramsey, III, *USGS National Wetlands Research Center*

Zhong Lu, Amina Rangoonwala, and Russell Rykhus

Analyzing Bathymetric Changes in Tampa Bay, Florida

Tao Zhang, *Department of Geography, Florida State University*

Xiaojun Yang

Coastal Change Analysis: Completion of the National Baseline

Shan Burkhalter, *NOAA Coastal Services Center*
Susan Fox

73. DEM — Digital Processing Methods

Moderator: Riadh Munjy, *California State University – Fresno*
Room 5

Novel Computational Technique for Super-Dense Digital Terrain Elevation Reconstruction through Method of Epipolar Characteristics Tracking

Lenny Rudin, *Cognitech Inc.*
Pascal Monasse, Pablo Muse, and Frederic Cao

New Approach for Planar Patch Segmentation using Airborne Laser Data

Ayman Habib, *Department of Geomatics Engineering, University of Calgary, Canada*
Changjae Kim

Three Dimensional Mosaicing of IFSAR DEM and Magnitude Data

Riadh Munjy, *California State University, Fresno*
Mushtaq Hussain

Detection of Vertical Objects in Full-Waveform Lidar Data using a 3D Wavelet-Based Approach

Christopher Parrish, *NOAA/National Geodetic Survey*
Frank Scarpace

74. Image Sensor Calibration

Moderator: Edward Oshel, *Image Service and Analysis Group*
Room 7

Radiometric parts of Calibration and Validation for the KOMPSAT-2

Dong-Han Lee, *Korea Aerospace Research Institute (KARI), Republic of Korea*
D. C. Seo, J. H. Song, S. Y. Park and H. S. Lim

Overview and Results of Calibration and Validation for the KOMPSAT-2

Dong-Han Lee, *Korea Aerospace Research Institute (KARI), Republic of Korea*
D. C. Seo, J. H. Song, S. Y. Park and H. S. Lim

Calibration of Space Shuttle Payload Bay and International Space Station External Zoom Television Cameras

Edward Oshel, *Image Science & Analysis Group*
Donn Liddle

A Calibration System for Visible and Thermal Infra-Red Digital Cameras

Donald L. Light, *Rochester Institute of Technology, Chester F. Carlson Center for Imaging Science*
Donald McKeown

75. Land Use/Land Cover Change Assessment

Moderator: Roger Crystal, *Sanborn*
Room 8

The Baby Bear Approach to Land Cover Mapping: Semiautomation of High Resolution Land Cover/Land use Mapping

Steven Lennartz, *Sanborn*
Andrew Brenner and Mathew Vernier

Land Use/Land Cover Change Monitoring and Effects Analysis in the Greater Mankato Area using Remote Sensing and GIS

Fei Yuan, *Minnesota State University, Mankato*
Christopher A. Kaczmarek

76. Noise/Clutter/Cloud Removal

Moderator: Zong Xiang Yang, *ITT Visual Information Solutions*
Room 2

Two Simple Methods for Removing Clouds and Cloud Shadows from Satellite Images

Qingmin Meng, *Warnell School of Forest Resources, University of Georgia*
Chris Cieszewski

An Object-Based Clutter Removal Technique For Spatial Feature Extraction Using Self-Learning Algorithm

Zongxiang Yang, *ITT Visual Information Solutions*
Scott Paswaters

A Noise Removal Approach for Lidar Intensity Images using Anisotropic Diffusion Filtering to Preserve Object Shape Characteristics

R. Nobrega, *Polytechnic School of Engineering, University of Sao Paulo, Brazil*
C. O'Hara

77. Photogrammetric Processing Methods

Moderator: Chunsun Zhang, *South Dakota State*
Florida Ballroom Salon II

Terrain Extraction Using Deformable 3D Surface for Consistency Constrain

Hongwei Zhu, *University of Wisconsin-Madison*
Frank Scarpace

Automatic 3D Road Network Reconstruction by Integrated Analysis of Images and GIS Data

Chunsun Zhang, *South Dakota State University*

Accurate Rectification of Three Dimensional Linear Features From Stereo Aerial Images

Xiangyun Hu, *Leica Geosystems Geospatial Imaging LLC and Wuhan University*
Zuxun Zhang

78. Photogrammetric Production Tools and Techniques

Moderator: Mostafa Madani, *Intergraph Corporation*
Florida Ballroom Salon I

An Enterprise Digital Photogrammetric System

Yandong Wang, *Intergraph Corporation*
Mostafa Madani

Ultra Cam and the All Digital Workflow

Michael Gruber, *Vexcel Microsoft, Austria*
Stefan Bernoegger

A Highly-automated Enterprise Orthophoto Production System

Mostafa Madani, *Intergraph Corporation*
Orrin Long and David Loescher

79. Remote Sensing Imaging Prototypes and Unmanned Autonomous Vehicles

Moderator: Andrea Laliberte, *USDA*

Room 3

A New Ground-based Stereo Panoramic Scanning System for Robotic Explorations

Ron Li, *The Ohio State University*

Lin Yan and Kaichang Di

Unmanned Aerial Vehicles for Rangeland Mapping and Monitoring: A Comparison of Two Systems

Andrea Laliberte, *U.S. Department of Agriculture ARS Jornada Experimental Range*

Al Rango and Jeff Herrick

80. Soil and Hydrology Mapping

Moderator: Zachary Bortolot, *Institute for Regional Analysis & Public Policy*

Room 9

Sensitivity Analysis of the Swat Model to the Resolution of Input

Julie Earls, *University of South Florida St. Petersburg*

Barnali Dixon

Hydrological Modeling of the Drainage Networks in the Pasir Open-Pit Coal Mine, Indonesia

Yosoon Choi, *Seoul National University, Republic of Korea*

Hyeong-Dong Park

A Computer-Based Approach for using Panchromatic Aerial Photographs to Map Impervious Surface Area

Zachary Bortolot, *Institute for Regional Analysis and Public Policy*

Christine McMichael

Satellite Monitoring of Hydrologic Transformations in Southern Egypt

Jonathan Chipman, *University of Wisconsin*

81. Special Session

Applications of Aerial Thermography

Moderator: Brian Huberty, *U.S. Fish & Wildlife Service*

Room 10

Using Forward Looking Infrared (FLIR) for Wildlife Surveys

Susan Bernatas, *Vision Air Research*

Commercial and Industrial Applications for Aerial Infrared Thermography

Greg Stockton, *Stockton Infrared Thermography Services, Inc.*

Thermal Sensing in Crop Production Management

Stephen Paley, *Agricultural Management Systems*

Exhibit Hall Beverage Break

9:30 am to 10:00 am

Grand Ballroom & Foyer

Technical Sessions

10:00 am to 11:30 am

82. Panel Discussion

Lidar Digital Elevation Data Acquisition/Processing Flow: A User's Perspective

Robert Eadie, *Intermap Technologies, Inc.*

Room 4

83. Special Session

Beyond Depth — Emerging Techniques in Active/Passive Data Fusion -and- Anticipated New Bathymetric Systems

Jeff Lillycrop, *U.S. Army Corps of Engineers*

Room 1

84. Cultural Feature Applications

Moderator: David Alvarez, *CDM*

Room 6

A Spatial Analysis of Selected Measures from the 2003 Ontario Public Library Statistics

Michael Brundin, *Faculty of Information and Media Studies, University of Western Ontario, Canada*

An Analysis of Global Urban Expansion using Remote Sensing and GIS

Jason Parent, *University of Connecticut*

Daniel Civco, Shlomo Angel, and Stephen Sheppard

85. DEM — Geology and Change Detection

Moderator: Robert Crawford, *Intermap Technologies*

Room 5

A Comparison of X- and P-Band Radar for Road Extraction in a Philippine Test Area

Robert Crawford, *Intermap Technologies*

Lidar Mapping Supporting Earthquake Research of the San Andreas Fault

Charles Toth, *Center for Mapping, The Ohio State University*

Dorota Brzezinska, Nora Csanyi, and Paska, Eva

Change Detection using Laser Altimetry

David Streutker, *Idaho State University*

Nancy Glenn

Detecting Ground Motion with Combining DEM Derived from InSAR and Satellite Images

Yishuo Huang, *Department of Construction Engineering, Chaoyang University of Technology, Taiwan*

Wei-Yu Chen and Jian-Guei Chen

86. Landsat Mapping Applications

Moderator: Rachel Kurtz, *USGS*

Room 7

Multi-temporal Surface Wetness Analysis of Desert Playa using Landsat Imagery

Dane Williams, *CH2M Hill*

Robert Robinson

Landsat Program Update: Campaigns, Technical Releases, and the Landsat Data Continuity Mission

Rachel Kurtz, *U.S. Geological Survey*

Kristi Kline and James Lacasse

Science Review of the New Landsat 7 Segmentation-Based Fill

Rachel Kurtz, *U.S. Geological Survey*

Kristi Kline and James Lacasse

87. Landscape and Image Scale Issues

Moderator: Qian Yu, *University of Massachusetts – Amherst*

Room 8

The Effect of Resolution on Classification: Object-Based vs Pixel-Based Approach

Qian Yu, *University of Massachusetts-Amherst*

Peng Gong and Yong Tian

Comparison of Methods for Determining Optimal Spatial Resolution for Collection of Ground Data and Remote Sensing Mapping of a Soil Erosion Cover Factor

Guangxing Wang, *Natural Resources and Environmental Services, University of Illinois*

George Z. Gertner, Alan B. Anderson, and Heidi Howard

A Regionwide Evaluation of Vegetation Indices for the Prediction of Leaf Area Index in the Southeast

Christine Blinn, *Virginia Tech*

Randolph Wynne

Identifying Scales and Classification for Urban Vegetation using High Spatial Resolution Satellite Data

Zhang Youjing, Nanjing, China

88. Object Detection and Classification

Moderator: Xiaoying Jin, *ITT Visual Information Solutions*

Room 2

A Study on Automated Registration of Road Networks with Imagery

Jose L. Flores, *School of Civil Engineering, Purdue University*

Jie Shan

Airplane Detection from Remote Sensing Imagery using a Modified Shape Context

Xiaoying Jin, *ITT Visual Information Solutions*

Scott Paswaters

89. Social and Environmental Mapping Issues

Moderator: Charles Yuill, *West Virginia University*

Room 9

Influences of Land Surface Temperatures and Landscape Patterns on the West Nile Virus Propagations in Two Midwest Counties

Hua Liu, *Indiana State University*

Qihao Weng

OCULUS — A Flexible Multi-Sensor Platform for Situational Awareness

Charles Yuill, *Center for Industrial Research Applications-West Virginia University*

James Smith and Franz Pertl

Urban Land Use Mapping using Object-based Classification Method

Sunhui Sim, *Florida State University*

Keith Clarke

Linking Multi-level Landscape Patterns with Biophysical and Socio-economic Conditions in an Estuarine Watershed

Xiaojun Yang, *Florida State University*

90. Transportation Mapping

Moderator: Ashley Holt, *University of California – Berkeley*

Room 10

GIS as a Knowledge Base for Reliable and Consistent Vehicle Localization through Data Fusion

Andrew Rae, *University of Waterloo, Canada*

Otman Basir

Object-oriented Classification of High-resolution Aerial Photography to Estimate Traffic Volumes in San Francisco, California

Ashley Holt, *University of California, Berkeley*

Edmund Seto, Tom Rivard, and Peng Gong

Use of Remote Sensing and Geographic Information Systems (GIS) to Enable Airports Meet Safe Flight 21 Database Compliance

Frederick Wilson, *Morgan State University*

Judy Jackson-Pringle

91. Urban Mapping

Moderator: Russell Congalton, *University of New Hampshire*

Room 3

Using Geospatial Analysis to Determine the Effects of Urbanization on Wetland Distribution in New Hampshire

Russell Congalton, *University of New Hampshire*

Katie Jacques and Kimberly Babbitt

Classification of Urban/residential Areas from an Ecological Perspective using Spectral Unmixing and a Decision Trees

B. Phelps, *Clark University*

J. Rogan

Introduction to the Korean Land Spatialization Research Project

Byung-Guk Kim, *Korean Land Spatialization Group*

Joon Heo

92. Vegetation Mapping: Classification

Moderator: Alexander Hernandez, *Utah State University*

Florida Ballroom Salon I

Discriminating Sagebrush (*Artemisia tridentata* spp.) Ecological States with High Resolution Remote Sensing Imagery

Alexander Hernandez, *RS/GIS Laboratories - Utah State University*

R. Douglas Ramsey and John Lowry

Vegetation Change Detection on Surface Coal Mines in Indiana using Image Fusion

Jiansheng Yang, *Ball State University*

Mapping Ecological Systems for the Northwest GAP Project

Steve Lennartz, *Sanborn Mapping*

Todd Sajwaj

Mapping Salt Marsh Vegetation in Humboldt Bay, California: Classifying Association Type and Percent Cover using Aerial Hyperspectral Imagery

Steven Steinberg, *Center for Integrative Coastal Observation, Research and Education - Humboldt State*

Chaeli Judd

Technical Sessions

12:30 pm to 2:00 pm

93. DEM – Quality Control

Moderator: Emmanuel U. Nzewi, *North Carolina A&T State University*
Room 5

Best Practices for Developing Lidar-derived DEMS

Emmanuel U. Nzewi, *North Carolina A&T State University*
Crystal O. Moore

Alternative Methodologies for Quality Control of Lidar Data

Ayman Habib, *Department of Geomatics Engineering, University of Calgary, Canada*

Paul Quackenbush and Ki-In Bang

The EuroSDR project: Automated Checking and Improving of Digital Terrain Models

Joachim Hohle, *Aalborg University, Denmark*

Experience with High Accuracy County DEM Mapping using Surveying, Photogrammetric, and Lidar Technologies - Government and Contractor Perspectives

Barbora Ubar, *Hillsborough County*
John Antalovich Jr. and Tim Brown

94. GIS – Analysis and Processing Methods

Moderator: Peter Kuntu-Mensah
Room 1

Nearest Neighbor Analysis: A Simple and Powerful Geographic Information Science Function

Qingmin Meng, *Warnell School of Forest Resources, University of Georgia*

Chris Cieszewski

Statistical Spatial Data Enhancement

Chad Schaeding, *Ferris State University*
Yaron Felus and Robert Burtch

95. Landscape Pattern Assessment

Moderator: Susan Buckingham, *University of Colorado/U.S. Geological Survey*
Room 8

Data Mining of Landscape Spatial Patterns to Identify Controls on Arid Dryland Productivity

Susan Buckingham, *University of Colorado/U.S. Geological Survey*
Jason Neff

The Chicxulub Meteor Impact and Ancient Locational Decisions on the Yucatán Peninsula, Mexico: The Application of Remote Sensing, GIS, and GPS in Settlement Pattern Studies

Terance Winemiller, *Auburn University Montgomery*

Predicting Forest Fragmentation in the Salmon River Watershed in Connecticut

Jason Parent, *Center for Land use Education and Research, University of Connecticut*
Daniel Civco and James Hurd

96. Vegetation Mapping: Indices

Moderator: Cynthia Berlin, *USGS*
Room 6

Automated Land Cover Assessment of Pinhook Bog, Indiana Dunes National Lakeshore: A Pilot Study Using Feature Analyst

Cynthia Berlin, *Upper Midwest Environmental Sciences Center, U.S. Geological Survey*

Jennifer Dieck

Analysis of the Relationship between NDVI and Climate Variables in Minnesota using Geographically Weighted Regression and Spatial Interpolation

Shouraseni Sen Roy, *Department of Geography and Regional Studies, University of Miami*

Fei Yuan

97. Vegetation Mapping: Invasive Plants

Moderator: Erin McCormick, *Navigation Electronics, Inc.*
Room 7

Detection of the Invasive Species, Sahara Mustard (*Brassica tournefortii*) in the Desert Southwest using Landsat and MODIS Imagery

Cyrus Hiatt, *NASA - DEVELOP*

Andres, Tracy, Zachary Likins, Mahdi Ashktorab, Sachi Lake, and Cindy Schmidt

Mapping Saltcedar in the Rio Grande Basin, Texas using High Spatial Resolution and Hyperspectral Remote Sensing Data

Le Wang, *Texas State University - San Marcos*
Jose Silvan

Implementation of Remote Sensing Techniques for Invasive Species Management

Jessica J. Mitchell, *Idaho State University*
Nancy F. Glenn and Jessica J. Mitchell

98. Water Resource Mapping

Moderator: Xianwei Wang, *University of Texas – San Antonio*
Room 9

Assessing Spatiotemporal Distribution and Variability of Snow Cover and SWE Based on MODIS and AMSR-E, and their Applications on Water Source Management in Yili River Watershed in Xinjiang, China

Xianwei Wang, *University of Texas at San Antonio*
Hongjie Xie and Tiangang Liang

Resource Management using Remote Sensing Techniques and GIS for Thoothukudi Taluk of Tamil Nadu State, India

M. Govindaraju, *Department of Eco-Biotechnology, Bharathidasan University, India*

99. Wildfire Mapping

Moderator: Michael Joos, *Pickett & Associates*
Room 10

Data Synthesis and Hybrid Classification for Vegetation and Fire-fuels Mapping in the Wildland/Urban Interface

John Koltun, *Geographic Resource Solutions*

A Rapidly Prototyped Vegetation Dryness Index Developed for Wildfire Risk Assessment at Stennis Space Center

Kenton Ross, *Science Systems and Applications, Inc.*
William Graham, Don Prados, and Joseph Spruce

Posters will be on display from 8:00 am, Wednesday, May 9th through 1:00 pm, Friday, May 11th, in the Florida Ballroom Foyer.

Analysis of the Geometric Accuracy of KOMPSAT-2 MSC Image Data

Doo-Chun Seo, *Korea Aerospace Research Institute*, South Korea
Su-Young Park and Hyo-Suk Lim

Mapping Seasonal Flooding in Sub-Saharan Africa using Temporal Remote Sensing Data

Yaw A. Twumasi, *Alabama A&M University. Department of Plant and Soil Science*

Tommy L. Coleman, Andrew Manu, and Edmund C. Merem,

Rubber Acreage Change Detection using Landsat TM: Linkages to Policies

Mohd Nazip Suratman, *MARA University of Technology*, Malaysia
Gary Bull, Don Leckie, Valerie LeMay, and Peter Marshall,

Geospatial Information Lifecycle and Sources of Error

George Brilis, *U.S. Environmental Protection Agency*

NASA Satellite and Modeling Products to Improve Water Management

David Toll, *NASA/GSFC*

Ted Engman, Lawrence Friedl, Kristi Arsenault, and Joseph Nigro

An Object-based Classification Model for Mapping Agricultural Landcover using Multi-temporal Data

Richard Powell, *Michigan Tech Research Institute*

2000s vs. 1990s Land Cover Change at the Anderson Level I level— A Spatial Frequency and Accuracy Analysis of Kentucky's Land Cover Change Dataset

Demetrio Zourarakis, *Kentucky Division of Geographic Information*

An Expert System Approach to Impervious Surface Mapping using Satellite Imagery and Lidar Data

Jungho Im, *University of South Carolina*

Jinyoung Rhee, Sunghyun Kahng, and Eunhee Kim

Implementing the Commercial Remote Sensing Space Policy

Julia McCartney Deis, *SAIC, U.S. Geological Survey/EROS*

Jeff Danielson, Elizabeth McCartney, and Brenda Ellis

Object-oriented Fire Scar Mapping in Ocala National Forest, Florida

Mary Henry, *Miami University*

Forensic Analysis of Satellite Imagery to Reconstruct Crop Histories

James Hipple, *U.S. Department of Agriculture Risk Management Agency*

Kirk Bryant and Garland Westmoreland

Impact of Agricultural Tillage Practice on Surface Temperature

Kevin Czajkowski, *The University of Toledo*

Hayase Rumiko, Patrick Lawrence, Kathryn Swartz, Philip Haney, and James Coss

Resource Inventory for Functional Assessment of Wetlands in the Hudson River

Susan B. Hoskins, *Institute for Resource Information Sciences*

Eugenia M. Barnaba

Mapping Submerged Aquatic Vegetation: Using Multi-Range Spectral Feature Fitting to Map Deep Submerged Eelgrass in a Turbid Estuary

Steven Steinberg, *Center for Integrative Coastal Observation, Research and Education - Humboldt State*

Judd Chaeli

Optimal Spectral Feature Selection for Detecting Hydric Stress in Centipede Grass (*Eremochloa ophiuroides*)

Maria Jose Garcia-Quijano, *Department of Geosciences, Florida Atlantic University*

John R. Jensen

Software System to Analyze High-resolution Satellite Imagery

Amar Nayegandhi, *ETI Professionals/U.S. Geological Survey*

John C. Brock

Attaining Morphological Statistics of Patch Reefs from Lidar

James Lebonitte, *ETI Professionals/U.S. Geological Survey*

Amar Nayegandhi and John Brock

Phenological Change Detection in Flat and Terrace Paddy using ASTER Satellite Images in Takayama River Basin Area

Din Ara Wahid, Japan

Tsuyoshi Akiyama

Effects of Elevation Datasets on Coastal Inundation Modeling

Nicholas McNamara, *University of Connecticut*

Jason Miller, Mark Hoover, Daniel Civco, and James Hurd

Vegetation Classification of an Oak/Savanna Ecosystem in Central Texas: A Data Fusion Approach

Gayla Mullins, *The University of Texas at Austin Center for Space Research*

Gordon Wells

An Improved Method for Conversion of Airborne Digital Images to Reflectance Images

A. Dewain Davis, *TerraVerde Technologies, Inc.*

Frank R. Schiebe

Using the Watershed Assessment Model to Estimate Surface and Groundwater Nitrate Loadings in the Woodville Recharge Basin, Leon County, Florida

Gregory Mauldin, *Tallahassee-Leon County GIS*

Hyperspectral versus Multispectral Satellite Data for Urban Land Cover and Land Use Mapping: Beijing, an Evolving City

Qiyun Tan, *Department of Geography, University of Western Ontario, Canada*

Jinfei Wang

Welcome to Tampa

Tuesday, May 8th, 6:00 pm to 9:00 pm

The Florida Region of ASPRS cordially invites all conference participants to attend its Welcome Reception being held Tuesday, May 8th from 6:00 pm to 9:00 pm at Jackson's Bistro; just a short walk from the Marriott Waterside Hotel. Come enjoy this scenic waterfront view of downtown Tampa while reacquainting and networking with friends and colleagues. Listen to the casual tropical sounds of live music while sampling some of Tampa's finest local cuisine.

On behalf of the Florida Region Board of Directors and our sustaining member sponsors we look forward to seeing you there.

To download an invitation to the 2007 ASPRS Annual Conference Opening Reception please go to the Florida Region ASPRS website at <http://www.flasprs.org/index.html>. Please bring this invitation with you to the reception.

18th Annual Awards Luncheon and 73rd Installation of Officers

Wednesday, May 9th, 12:15 pm to 1:45 pm

Florida Ballroom VI

Join in recognition of your colleagues and participate in the occasion marking the installation of the Society's 73rd slate of officers.

The 2007 award recipients will be honored at this luncheon. The annual business meeting of the ASPRS will include installation of Officers and Directors. Kari Craun, outgoing President, will summarize the past year's events and Jim Plasker, Executive Director, will present the annual report of the Society.

Luncheon tickets are required. They may be purchased at the ASPRS Registration Desk on Level Two of the Marriott Waterside Hotel until 5:00 pm on Monday, May 7. All on-site sales are subject to availability. The cost is \$45 per person.

Limited seating in the rear of the room is available at no cost to conference registrants wishing to attend the ceremony and business meeting only.

Exhibitors' Reception

Wednesday, May 9th, 5:30 pm to 7:00 pm

Grand Ballroom

- ⚙ View the many products and services offered by the world wide suppliers and your hosts for the evening.
- ⚙ Meet old friends and make new ones at this great networking event.
- ⚙ Enjoy light hors d' oeuvres and beverages.

Memorial Address and Student/Region Award

Thursday, May 10th, 12:15 pm to 1:15 pm

Florida Ballroom VI

This year's Memorial Address will feature the life and achievements of Ta Liang, presented by Warren Phillipson. For complete event details refer to page 31.

This gathering affords everyone an opportunity to remember the great accomplishment of the industry pioneers and a chance to learn how they continue to impact our world today, as well as acknowledging our leaders of tomorrow with the presentation of the Student and Region Awards. Tickets are not required.

An Evening at the Florida Aquarium

Thursday, May 10th, 6:00 pm to 9:00 pm

For an unforgettable experience, plan on an Evening at the Florida Aquarium. You will see why it's among the top aquariums in the world with over 10,000 aquatic plants and animals, including sharks, otters, gators, free-flying birds, and exotic sea dragons. Couple all of this with an opportunity to mingle with your fellow attendees while enjoying delicious refreshments and live music making it an evening to remember.

The admission for this event is included for those paying full registration fees. Other Conference registrants may purchase tickets for \$65 each when registering. Tickets for children under 12 may be purchased for \$20. Children over 12 must have a full price ticket. A limited number of on-site tickets will be available at the ASPRS Registration Desk until 12 noon on Tuesday, May 7. Everyone attending this event must have a ticket. Tickets will not be sold at the Aquarium.

(The aquarium is a short walk from the Marriott Waterside Hotel along Channelside Drive. The hotel staff will offer directions. Limited bus transportation will be provided throughout the evening starting at 5:45 pm. The buses will load at the hotel front entrance.)



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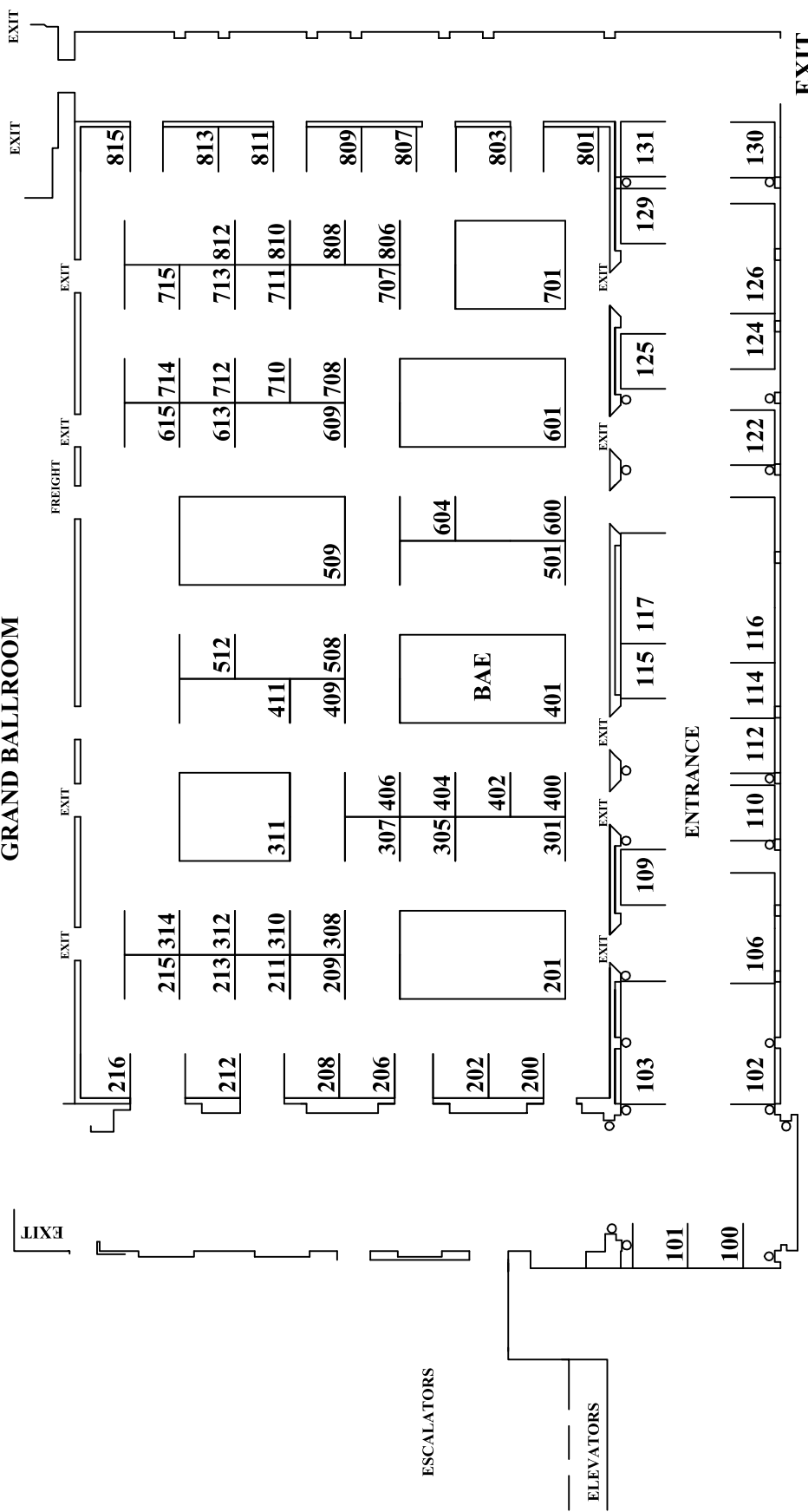
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Booth 402

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Booth 116

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(303)444-6522; (303)444-6825 (Fax)
www.asdi.com

The world leader of truly portable, spectrometer and spectroradiometer systems. Since 1990, ASD has helped change the way spectroradiometry is performed, and used in over 50 countries, in a variety of environments—field, laboratory, and more. All the performance you expect in a laboratory system, yet portable and easy to handle, ASD's systems are dramatically enhancing the quality and scope of countless applications requiring measurement of radiance, irradiance, reflectance or transmission.

Booth 404

Booth 815

Applanix Corporation

85 Leek Crescent
Richmond Hill
Ontario Canada L4B 3B3
(905)709-4600; (905) 709-6027 (Fax)
www.applanix.com

Applanix, a wholly owned subsidiary of Trimble, develops, manufactures, sells and supports precision products that accurately and robustly measure the position and orientation of vehicles operating in dynamic environments. Applanix's Position and Orientation Systems (POS) are used in a variety of applications, including road profiling, GIS data acquisition, aerial surveying and mapping, railroad track maintenance and seafloor mapping. Established in 1991, Applanix supports customers around the world with exceptional service - anywhere, at anytime.

Booth 707

Avineon, Inc.

15500 Lightwave Dr. Ste. 200
Clearwater, FL 33760
(727) 539-1661; (727) 539-6954 (Fax)
www.avineon.com

Founded in 1992, Avineon offers geospatial, information technology, and engineering support services such as GIS specification development, training, application development, project management, scanning, photogrammetry, stereo-compilation, photo interpretation, environmental mapping, data conversion/migration, and data maintenance. Our staff's subject-matter expertise includes representation of electric, gas, telephone, and water/wastewater/sewer facility data in all major GIS formats. An ISO 9001:2000 and SW-CMMI Maturity Level 3 registered firm, Avineon operates worldwide from offices in the U.S., Europe, and India.

BAE Systems

11487 Sunset Hills Rd.
Reston, VA 20190
(800) 316-9643 Toll Free; (703) 668-4381 (Fax)
www.baesystems.com/gxp

BAE Systems' Geospatial eXploitation Products (GXP) division is a global provider of software for image analysis, geospatial analysis and photogrammetry. From critical mission planning and disaster relief to topographic mapping, land use management and transportation planning, GXP develops groundbreaking tools used to deliver accurate geospatial and intelligence data — when every minute counts. GXP helps its customers optimize their return on investment by delivering quality technical support and training. Software products include SOCET SET® and SOCET GXP®.

Blue Marble Geographics

397 Water Street, Suite 100
Gardiner, ME 04345
(207)582-6747 x10; (207)582-7001 (Fax)
www.blumarblegeo.com

Blue Marble Geographics of Gardiner, Maine is a leading developer and provider of geographic software products that provide sensible solutions for users and developers of geographic data. Blue Marble has been writing GIS software tools and solutions for 14 years and currently serves hundreds of thousands of customers world wide.

Cardinal Systems, LLC

701 North Oceanshore Boulevard
Flagler Beach, FL 32136
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www.cardinalsystems.net

With a long and successful history of developing photogrammetric and mapping solutions, Cardinal provides the most efficient, pragmatic mapping tools available today. Now offering VrOne, VrTwo, VrOrtho, VrAirTrig, VrMosaic, VrBalance, VrAdjust, VrVolumes and VrLite we are continually developing fresh new programs for the industry in which Vr is fast becoming the standard. We invite you to visit Booth 812 for a demonstration of our latest product features.

Clark Labs

950 Main Street
Worcester, MA 01610
(508)793-7526; (508)793-8842 (Fax)
www.clarklabs.org

Clark Labs is dedicated to research and development of geospatial technologies for effective, responsible environmental management. Clark Labs is known for its flagship product, the IDRISI GIS and Image Processing software. Since its 1987 inception, IDRISI has been used in

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a wide range of industries and is currently used in over 175 countries. Environmental managers and researchers benefit from the unsurpassed range of geospatial tools – over 200 modules for the analysis and display of digital spatial information

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CRC Press, a member of the Taylor & Francis Group is a premier publisher of books, journals, and electronic databases on GIS, remote sensing and mapping sciences. Visit our booth for our latest offerings including the new edition of our best selling textbook, Introduction to Remote Sensing, Second Edition and the recently published reference work, Image Analysis, Classification and Change Detection in Remote Sensing: With Algorithms for ENVI/IDL. Take advantage of convention discounts free journal samples.

DAT/EM Systems International

8240 Sandlewood Place, Suite 101
Anchorage, Alaska 99507 USA
(907)522-3681; (907)522-3688 (Fax)
www.datem.com

With 20 years of expertise, DAT/EM Systems International is a leading developer of photogrammetric software and hardware solutions. DAT/EM specializes in 3D stereo viewing and precise feature data collection software. Its products include the SUMMIT EVOLUTION® digital stereoplotter and DAT/EM CAPTURE, which allows stereoplotters to digitize directly into AutoCAD® and MicroStation® and ArcGIS®.

Definiens, Inc.

55 Madison Avenue, Suite 400
Morristown, NJ 07960
(720) 932-8160; (720)932-8168 (Fax)
www.definiens.com

Definiens Enterprise Image Intelligence Suite, EII, provides object based image analysis for a multitude of Earth science applications, such as feature extraction, change detection, classification, resource management, and environmental monitoring. EII accepts multiple sources of input data; including aerial and satellite imagery (multi and hyper-spectral), Lidar and SAR, and thematic vector data from a geo-database. It combines and analyzes data combinations like no other product, all in a high production scalable environment. Definiens – understanding images!

Digital Aerial Solutions, LLC (DAS) Booth 512

8409 Laurel Fair Circle, Suite 100
Tampa, Florida 33610
(813)628-0788; (813)628.0777 (Fax)
www.digitalaerial.com

Digital Aerial Solutions, LLC (DAS), Tampa, Florida provides aerial data acquisition services, image processing and commercial access to geospatial information products. DAS employs Leica's latest generation ADS40 / 50 airborne digital sensor technology flown onboard a Cessna 441 Conquest and 421C aircraft equipped with airborne GPS/IMU system. DAS serves federal, state, county local governments as well as A&E firms, agricultural, environmental, natural resource, transportation, power & utility industries. DAS is a Licensed Florida PSM Company.

Booth 401

Booth 305

Booth 812

Booth 115

Booth 806

Booth 311

Booth 708

Exhibitor Descriptions

DigitalGlobe

1601 Dry Creek Drive #260
Longmont, CO 80503
(303)684-4000; (303)684-4048 (Fax)
www.digitalglobe.com

Longmont, Colo. - based DigitalGlobe is the clear leader in the global commercial Earth imagery and geospatial information market. The company's technical superiority and innovation, unparalleled commitment to customer service, extensive business partner network and open systems philosophy make DigitalGlobe the preferred supplier of imagery products to government and commercial markets. DigitalGlobe's QuickBird satellite is the world's highest resolution commercial imaging system. The company's next-generation WorldView 1 satellite is scheduled to launch in mid-2007, and its WorldView 2 satellite is anticipated to launch in late 2008.

DIMAC SYSTEMS s.a.r.l.

95 Grand Rue, L-3313
Bergem, LUXEMBURG
352 2651 2166; 352 2651 2165 (Fax)

DIMAC Systems, LLC

1230 Hunter Court
Longmont, Colorado 80501
(303) 651-2018; (303) 651-7693 (Fax)
www.dimacsystems.com

DIMAC Systems is a customer focused provider of the cost effective DIMAC 2.0 large format digital aerial camera. Our innovative camera system and straight forward work flow processing are changing the quality of digital imagery. Key features include DiMAC's patented True FMC which allows for direct capture of True Color imagery. Find out why the DiMAC truly fulfills the promise of digital aerial imagery today and will continue to do so tomorrow.

Directions Magazine

1001 Green Bay Road #116
Winnetka, IL 60093
(847)242-0412; (240)250-7257 (Fax)
www.directionsmag.com

Directions Media is the leading source of information, news and commentary in geospatial and location-based technologies. We keep our readers informed with news and technology issues quickly and thoroughly through our various publications. Our readers gain an "inside edge" in their careers by reading our publications and attending our events. Read our publications daily: Directions Magazine (www.DirectionsMag.com); All Points Blog (www.AllPointsBlog.com); and LBS360.NET (www.LBS360.NET). Attend our conferences: Location Intelligence Conference (www.LocationIntelligence.net) and the Rocket City Geospatial Conference (www.RocketCityGeospatial.com)

Dudley Thompson Mapping Corporation (DTM)

7445 132nd Street, Suite 2025
Surrey,
British Columbia, Canada, V3W 1J8
(604)592-6522; (866)902-2923 (Toll Free)
www.dtm-global.com

DTM Corporation was formed in September 2006, to provide aerial photography, scanning, aero-triangulation, digital mapping and ortho-photo services. The principals, Nick Dudley, CGM and Mike Thompson, P.Eng. have a combined experience of 36 years in the mapping sciences. Their focus is on accuracy, quality and timing of products and services using leading technologies and tools. For further information, please contact Nick Dudley (ndudley@dtm-global.com) or Mike Thompson (mthompson@dtm-global.com)

Booth 129

Dynamic Aviation

1402 Airport Road
P.O. Box 7
Bridgewater, VA 23112
Phone: 540-828-6070; 540-828-4031 Fax
www.dynamicaviation.com

Dynamic Aviation specializes in providing turbine powered aircraft and aviation infrastructure to organizations with exacting data needs, but lacking aviation resources. We offer versatile, superior aerial platforms into which existing and emerging technologies can be installed to acquire data of all types. Our aerial platforms can be deployed to obtain LiDAR and multi/hyperspectral data. They may be used for aerial photography, geophysical survey, and air sampling; as well as for aerial and maritime surveillance.

E. Coyote Enterprises, Ltd.

P. O. Box 119
228 Lee Road
Mineral Wells, TX
(940) 325-0757; (940) 325-0941 (Fax)
www.ecoyote.com

ECE specializes in sales and service of aerial data acquisition equipment and peripherals. We are the sole worldwide service agency LMK aerial cameras. Since 1990 we have offered the IGI mbH CCNS4 flight management systems with AEROcontrol precise positioning option. The GSM 3000 gyro stabilized mount from SOMAG a.g. suitable for many aerial data collection instruments helps us give our clients the best options for their projects.

Eagle Mapping Group

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V3C 6N2 Canada
877-942-5551 (Toll Free); 604-942-5951 (Fax)
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You choose, we deliver high quality digital mapping, data and imagery tailored to your unique needs. The Eagle Mapping Group (ISO) global services offer turnkey mapping solutions for diverse industry sectors and stages of development. Combining industry, qualified partners, technology and languages, we respond to your specific business challenges e.g. Topographic, Lidar, Orthophotos, Satellite, Fly-throughs, Aerial Photos... exploration, development, access, volumes... contours and breaklines, scale and format...you choose. Canada, Chile, Peru, where are you?

EarthData International, Inc.

7320 Executive Way
Frederick, MD 21704
(301)948-8550; (301)963-2064 (Fax)
www.earthdata.com

EarthData provides a full range of mapping and GIS services to support customers' various needs. The organization collects aerial photography, uses airborne laser (lidar) and imaging radar (GeoSAR) systems to produce 3D terrain models, and develops or deploys other remote sensing technologies to detect thermal and multispectral information about the earth's surface. EarthData uses this data to create and supply photogrammetric, lidar, radar, and digital orthophoto mapping and GIS applications and services, world-wide.

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Booth 406

Booth 803

ER Mapper

13400 Sabre Springs Pkwy., Suite 150
San Diego, CA 92128
(858)391-5638; (858)391-5649 (Fax)
www.ermapper.com

ER Mapper leads the way in the innovation and deployment of advanced Geospatial Imagery Solutions. We supply solutions for enhancing and analyzing, managing, deploying and integrating large geospatial imagery datasets. We provide off-the-shelf software products, software development kits, customization & integration services, as well as consultancy. Our clients include Shell Oil, the Department of Homeland Security, as well as many state and local governments around the world.

ESRI

380 New York Street
Redlands, CA 92373-8100
(909)793-2853; (909)793-5953 (Fax)
www.esri.com

ESRI has been the world leader in the geographic information systems (GIS) software industry for over 37 years, with 300,000 clients and one million users in 220 countries. ESRI's innovative solutions enable you to author, serve and use raster and vector information in one environment. ESRI will be demonstrating raster data management, Image Server and ArcGIS® software products that help you solve problems and make smart and timely decisions. Visit us at booth 701.

Federal Geographic Data Committee

12201 Sunrise Valley Drive, MS 590
Reston, VA 20192
(703)648-4150; (703)648-5755 (Fax)
www.fgdc.gov

The Federal Geographic Data Committee (FGDC) is an interagency committee which promotes the coordinated development, use, sharing, and dissemination of geospatial data on a national basis. This nationwide data publishing effort is known as the National Spatial Data Infrastructure (NSDI), a physical, organizational, and virtual network designed to enable the development and sharing of this nation's digital geographic information resources. FGDC activities are hosted by the National Geospatial Programs Office (NGPO) of the U.S. Geological Survey.

GEO:connexion Ltd

PO Box 265
Godmanchester, Cambridgeshire
PE29 2WN
United Kingdom
44 (0) 1223 279151; 44 (0) 1223 279148 (Fax)
www.geoconnexion.com

Geo:connexion International Magazine is the leading business-to-business monthly magazine for global users of spatial technologies.

GeoCue Corporation

9968 Madison Blvd., Suite 101
Madison, AL 35758, USA
(256) 461-8289; (256) 461-8249 (Fax)
www.geocue.com

GeoCue Corporation is a software development and consulting services company specializing in geospatial production management solutions. We will be demonstrating our GeoCue product family of integrated solutions in booth #308 as well as during our annual user's group meeting on May 8th from 8:00 a.m. until 12:00 p.m. These products provide an integrated end-to-end processing framework that,

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when combined with industry leading production tools, significantly reduces production time from data acquisition to finished product.

GeoEye

21700 Atlantic Blvd
Dulles, VA 20166
(800) 252-9037
www.geoeye.com

Headquartered in Dulles, Virginia, GeoEye is the world's largest operator of commercial imaging satellites, and is the premier provider of geospatial data, information, and value-added products for the national security community, strategic partners, resellers, and commercial customers. GeoEye operates a constellation of three Earth imaging satellites-IKONOS, OrbView-3 and OrbView-2, and GeoEye-1 (under development)-and possesses an international network of regional ground stations, a robust image archive, and advanced geospatial imagery processing capabilities. For more information, visit www.geoeye.com.

Booth 310

Booth 701

Geographic Resource Solutions

1125 16th Street, Suite 213
Arcata, CA 95521
(707) 822-8005

700 West 41st Avenue, Suite 200
Anchorage, AK 99503
(907) 563-9511
www.grsgis.com

GRS is an industry leader in GIS and Remote Sensing services and consulting. GRS is internationally known for our innovative techniques that enable us to perform highly detailed and accurate classifications of land-cover, fire-fuels, vegetation, and habitat in projects ranging from hundreds to millions of acres. GRS has developed state-of-the-art algorithms and processes for image classification, fire-hazard modeling, data-entry, and GIS data validation. GRS also provides customized training, system design, and data conversion services supporting all major GIS applications.

Booth 109

Booth 215

Geoinformatics

CMedia Productions B.V.
P.O. Box 231
8300 AE Emmeloord
The Netherlands
31 (0) 527 619 000; 31 (0) 527 620 989 (Fax)
www.geoinformatics.com

Geoinformatics provides coverage, analysis and commentary to the international surveying, mapping and GIS industry. Recognizing the integrated nature of the geospatial information industry, Geoinformatics presents thought provoking information. Geoinformatics provides valuable and insightful information to its readers, so that they remain on the cutting edge of the geospatial industry, thereby enabling them to learn, create and develop new opportunities for society. Geoinformatics is published eight times a year. The circulation exceeds 9,000 copies per issue worldwide.

Booth 815

Booth 815

Geospatial Solutions

201 Sandpointe Ave., Suite 500
Santa Ana, CA 92707
(714)338-6700 – (714)338-6171 (Fax)
www.geospatial-solutions.com

Geospatial Solutions, the premier global media brand dedicated to GIS and related spatial technologies, provides news, policy initiatives, market developments, emerging technologies, and solutions-based case studies critical to an audience of high-tech professionals in government, the private sector, and academia. Geospatial-online.com features

Booth 815

Exhibitor Descriptions

highly focused business- and application-specific web sites, providing daily news and insights along with a number of special-interest e-mail newsletters to keep the spatial community abreast of news and developments throughout the month. www.geospatial-online.com

GeoTec Media/GeoWorld Magazine Booth 100

760 Market Street, Suite 432
San Francisco, CA 94102
(415)839-5060; (415)398-3511 (Fax)
www.geoplacement.com

GeoTec Media, publisher of GeoWorld, a BPA-audited monthly magazine reaching 25,050 subscribers, has been serving the geospatial community since 1987. Concentrating in government, emergency management, environmental management, utilities and public works, GeoWorld's editorial helps professionals thrive in today's marketplace. The magazine also hosts GeoPlace.com and the GeoTec Event in Canada.

Groupe ALTA

607, 6th Avenue de l'Aéroport
Quebec, Quebec Canada G2G 2T4
(418) 667-1913
www.groupealta.com

Groupe ALTA is a North American leader in the field of data solutions and geospatial information. With more than 200 professionals involved in integrated geospatial solutions worldwide, Groupe ALTA implements and exploits the most advanced technologies and techniques in the industry of data acquisition and analysis. It also develops and distributes DVP's line of powerful photogrammetric and digital imagery software for mapping and GIS professionals:

HAS Images, Inc.

136 North Saint Clair St., Suite 300
Dayton, OH 45402
(937)222-3856; (937)222-2443 (Fax)
www.hasimages.com

HAS Images, Inc. is an aerial photo processing laboratory, producing a range of conventional and digital products from aerial films. Our services include image scanning with geometric precision using a LH Systems DSW 700 and Vexcel VX 4000 image scanners, rectification, mosaicing, and hard-copy output to 48" x 96" using the Cymbolic Sciences Light Jet 5000 RS large format digital printer. HAS Images is an authorized Kodak Reseller of Aerial Products. See the "HAS Film Cleaning System" in Booth 600.

Imaging Notes Magazine

P. O. Box 11569
Denver, CO 80211
(303) 477-5272; (303)876-2915 (Fax)

Imaging Notes covers Earth remote sensing for security, energy and the environment. It is a quarterly publication for remote sensing professionals, providing objective in-depth reporting of major stories affecting the industry worldwide. We cover defense/security, natural resources/energy, the environment/ climate change, emergency response/disaster relief, digital mapping and transportation/infrastructure. On www.imagingnotes.com, you can subscribe quickly, and you can read the current issue, and search our archive of articles.

Infoterra GmbH

88039 Friedrichshafen
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49 7545 8 9969; 49 7545 8 1337 (Fax)

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France
33 (0)5 62 19 55 70; 33 (0) 5 62 19 97 81 (Fax)
www.infoterra-global.com

Infoterra is a leading provider of geo-information products and services for managing the development, environment and security of our changing world, providing operational products and services across the entire geo-information spectrum, ranging from data acquisition to GIS development. Further, Infoterra holds the exclusive commercial exploitation rights for the new high-resolution radar satellite TerraSAR-X and will provide an extensive portfolio of TerraSAR-X Services as soon as the satellite has become operational in 2007.

INPHO

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70174 Stuttgart, Germany
49-711-228810; 49-711-2288111 (Fax)
www.inpho.de

INPHO is a leading worldwide photogrammetric systems provider. In February 2007, INPHO has become part of Trimble's Spatial Imaging Initiative. All INPHO products are exhibited, including the stereo DTM editing station DTMaster, INPHO's solution for LIDAR data processing, automatic aerial triangulation (MATCH-AT), true orthoimage generation (OrthoMaster), color balancing and ortho mosaicking (OrthoVista), automatic DTM generation (MATCH-T) and stereo plotting (Summit Evolution). Our team from inphoUSA, Inc. and INPHO Germany will be pleased to welcome you.

Intergraph Corporation

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Join Intergraph to learn about the latest updates in Intergraph's photogrammetry products. Hear about Intergraph's complete systems for producing maps, digital terrain models and other geographic data that government, military, and commercial organizations need to preserve accuracy and precision of data. Intergraph experts will highlight the latest in Z/I Imaging digital mapping camera system technology including new storage capacity, flight and sensor management, and automated production systems.

I.S.M. International Systemap Corp. Booth 125

660 - 1188 Georgia Street West
Vancouver BC
Canada V6E 4A2
(604)669-8439; (604)669-8496 (Fax)
www.myPurVIEW.com

I.S.M. International Systemap Corp. presents PurVIEW, an ESRI ArcGIS® extension for precise stereoscopic viewing of image models and accurate 3D geodatabase-direct feature digitizing, exploiting the same data staples used in ArcGIS® Image Server on-the-fly orthophoto processing. PurVIEW is already de facto industry standard in Canadian forestry, popular in environmental studies and the new essential tool in due diligence stereoscopic QA inspection of digital image acquisition.

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Booth 106

Booth 311

Booth 600

Booth 509

Booth 815

ITRES Research Limited

#110, 3553 31 Street NW
Calgary, Alberta T2L 2K7
Canada
(403)250-9944; (403)250-9916 (Fax)
www.itres.com

ITRES (1979) provides digital airborne hyperspectral sensor technologies & environmental airborne mapping services. Sensor products include the VNIR CASI-550 & wide array CASI-1500, Thermal IR TASI & TABI, SWIR SASI, the Multiple Sensor Instrument Controller (MuSIC), & remote sensor operation capability. ITRES acquires high-resolution hyperspectral data worldwide for physics-based applications in wetlands, coastlines, water quality, forestry, minerals & geology, landmine & UXO detection. Contact: Steven Mah, Vice President, Business Development, smah@itres.com ; Tyme Wittebrood, Director, Sensor Services, twittebrood@itres.com

ITT Visual Information Solutions Booth 508

4990 Pearl East Circle
Boulder, CO 80301
(303)786-9900; (303)786-9909 (Fax)
www.itvis.com

ITT Visual Information Solutions presents ENVI, the premier software solution for reading, exploring, preparing, analyzing, and sharing information from imagery. Scientists and researchers choose ENVI for its advanced spectral processing capabilities, proven functionality, and user friendly interface. Key features of this cross-platform solution include anomaly detection, feature extraction, image classification, and automatic registration of multiple images. ENVI is easily customized for the unique needs of scientists and researchers using IDL, ENVI's easy-to-use underlying programming language.

John Deere Agricultural Services Booth 131

3810 Mansell Road
Suite 300
Alpharetta, Georgia 30022
(770) 238-5160 - (770) 238-5205 (Fax)
www.johndeere.com

KLT Associates, Inc. Booth 501

100 Corporate Place, Suite 202
Peabody, MA 01960-3809
(978)536-9100; (978)536-9100 (Fax)
www.kltassoc.com

ATLAS was written specifically to handle solutions for GIS and Engineering mapping of 3D geographic data, interactively editing both graphic and non-graphic attribute information. ATLAS provides a fully integrated system for collecting, editing, and retrieving geographic information, softcopy stereo data collection, TINs, and production ortho rectification of aerial, satellite and digital imagery, including digital cameras as ADS40 or DMC. A fully integrated, automated Aerial Triangulation system provides solutions for even the most difficult mapping projects.

Leica Geosystems Booth 601

5051 Peachtree Corners Circle
Norcross, GA 30092
(770)776-3400; (770)776-3500 (Fax)
www.gi.leica-geosystems.com

When building image-based maps, you need reliable measurements and solutions for your entire workflow. Leica Geosystems established itself as the industry leader in data capture and digital mapping, the product collection includes the most sophisticated flight planning software and airborne sensors. The broad array of airborne sensors capture

data efficiently and with precision. Leica Geosystems is best known for its broad array of products that capture accurately, model quickly, analyze easily, and visualize and present spatial information.

LizardTech Booth 211

1008 Western Ave., Ste. 200
Seattle, WA 98104
(206)652-5211; (206)652-0880 (Fax)
www.lizardtech.com

Since 1992, LizardTech has delivered state-of-the-art technology for managing and distributing massive, high-resolution digital content. Government and non-government organizations have benefited from the company's software products and technologies. LizardTech pioneered MrSID® and sits on the Technical Committee of the Open Geospatial Consortium (OGC) for the purpose of extending the capabilities of JPEG 2000 to geospatial applications, driving cross-platform interoperability and rapid Internet distribution for geospatial imagery. LizardTech's geospatial line of products includes GeoExpress, Express Server and Spatial Express.

MDA Federal Inc. (formerly EarthSat) Booth 400

6011 Executive Boulevard, Suite 400,
Rockville, MD 20852-3837
(240)833-8200; (240)833-8201 (Fax)
www.MDAFederal.com

MDA Federal Inc., of Rockville, Maryland, is the leading provider of integrated GIS and remote sensing solutions to federal, state and local agencies, international organizations, and private companies. Established in 1969, MDA Federal Inc. specializes in all-source satellite image processing (orthorectification, multi-resolution merging, mosaicking, digital printing), GIS applications, feature extraction, landcover mapping, change detection, weather forecasting, crop monitoring, geological interpretation, hyperspectral applications, and the continuous monitoring of the Earth's resources.

Merrick & Company Booth 209

2450 S. Peoria St.
Aurora, CO 80014
(303)751-0741; (303) 745-0964 (Fax)
www.merrick.com/servicelines/gis/

Merrick & Company provides comprehensive, client-focused land information services including LiDAR mapping, digital image acquisition, and photogrammetric services. Merrick has also developed the MARS® software application, a stand-alone, Windows-based tool suite specifically designed for processing, analyzing and managing terrain data. MARS® provides unparalleled application and visualization performance for massive LiDAR datasets and includes support for data analysis, classification and breakline operations.

Microsoft® Virtual Earth™ Business Unit Booth 201

1609 38th Street
Boulder, Colorado 80301
(303)583-0200; (303)583-0246 (Fax)
www.vexcel.com

Microsoft's Virtual Earth business unit includes recently acquired Vexcel Corporation aerial photogrammetric solutions, including the UltraCam digital aerial camera and the UltraMap Server for data archiving, cataloging and post-processing. The UltraCam is a key component of Microsoft's strategy for its Virtual Earth web-based, mapping and search application development platform, providing best-of-breed large format aerial imagery for location-based applications for consumers, businesses, and government agencies.

Exhibitor Descriptions

NASA Earth System Science

Land Processes Data & Services
47914 252nd St.
Sioux Falls, SD 57198
(605) 594-6949; (605) 594-6963

Booth 114

National Geospatial-Intelligence Agency (NGA) Booth 314

4600 Sangamore Road
Bethesda, MD 20816-5003
Mail Stop: D-143
(301)227-5669; (301)227-0117 (Fax)
www.nga.mil

NGA is a major combat support agency of the Department of Defense and an integral member of the Intelligence Community. NGA provides timely, relevant, and accurate geospatial intelligence (a combination of imagery, imagery intelligence, and geospatial information) to the military warfighter and our nation's civilian senior policy and decision makers. NGA's geospatial intelligence provides the knowledge foundation our customers need for planning, decision, and action.

National Geospatial-Intelligence Agency (NGA) Booth 312

12310 Sunrise Valley Drive
Reston VA 22101
(703)755-5919
www.nga.mil

The National Geospatial-Intelligence Agency (NGA) is a combat support agency under the Department of Defense. NGA provides timely, relevant, and accurate geospatial intelligence in support of national security goals and objectives. Our geospatial intelligence products serve a variety of military, civil, and international needs. NGA's vision is "Know the Earth, Show the Way."

New Tech Services, Inc. Booth 206

P.O. Box 16301
Sugar Land, TX 77496-6301
(281)573-8029; (281) 573-8030 (Fax)
www.TopoFlight.com

New Tech Services, Inc. started in 1991 providing photogrammetric equipment and support anywhere in the world. NTS continues the partnership with Flotron of Switzerland to provide TopoFlight. The new version 6.0 will be shown at the Convention. TF can be loaded onto a Server and used by the Estimator, Pilot, Surveyor, Operator and others. The program is sophisticated but user friendly. TopoFlight is special priced for this event.

NOAA's National Ocean Service Booth 117

National Geodetic Survey (NGS)
SSMC4, Room 13632
1305 East-West Hwy
Silver Spring, Maryland 20910
(301) 713-3074
www.noaa.gov

The National Geodetic Survey (NGS) defines and manages the National Spatial Reference Systems, which determines position, height, distance, direction, gravity, and shoreline throughout the United States. The NGS Remote Sensing Division assists the national airspace system by providing airport geodetic control, runway, navigational aid, obstruction, and other aeronautical data. It also plans and acquires aerial photography and compiles shoreline data, mostly for nautical charts.

North West Geomatics/ Valtus Imagery Services

5438 11 Street NE, Suite 212
Calgary AB, Canada T3E 7E9
(403) 295-0694; (403) 295-2444 (Fax)
www.nwgeo.com and www.valtus.com

Booth 809

North West Geomatics and Valtus Imagery Services provide end-to-end solutions for the collection, processing, management and delivery of earth information in the form of aerial photography, satellite imagery, elevation information and related data. The companies have a 30 year track record of helping customers gain a better understanding of the geographies they serve. Our solutions are recognized for technological innovation, reliability and our steadfast commitment to delivering high quality imagery directly to the desktop.

NovAtel Inc. Booth 110

1120 68 Ave NE Calgary
Alberta T2E 8S5 Canada
(403)295-4500; (403)295-4901 (Fax)
www.novatel.com

NovAtel Inc. is a leading provider of precision Global Navigation Satellite System (GNSS) components and subsystems. ISO 9001 certified, NovAtel is focused on developing quality OEM products including receivers, antennas, enclosures and software that are integrated into high precision positioning applications worldwide. These applications include surveying, GIS mapping, precision agriculture, port automation, mining, marine and defence industries. NovAtel's reference receivers are also at the core of national aviation ground networks in the USA, Japan, Europe, China and India.

Optech Incorporated Booth 609

300 Interchange Way, Vaughan
ON, L4K 5Z8, CANADA
905-660-0808; 905-660-0829 (Fax)
www.optech.ca

Optech is the world leader in the development, manufacture and support of advanced laser-based survey instruments. Our ALTM products continue to set the global standard for airborne laser terrain mapping. Innovative products such as the ALTM Gemini with its 167 kHz laser rep rate, 100 Hz scan rate, Multipulse technology; the Waveform Digitizer, capable of measuring multiple pulses/returns; digital camera integration; DASHMap and Zinview software packages – all these make Optech the obvious choice in airborne lidar systems.

Optimal Geomatics Booth 810

2227 Drake Avenue SW, Bldg 14
Huntsville, AL 35805
(800) 723-0555; (256) 882-7774 (Fax)
www.optimalgeo.com

Optimal Geomatics Inc. specializes in the science and technology of gathering, analyzing, interpreting, distributing and using geographic information. Optimal applies the disciplines of surveying, mapping, remote sensing, geographic information systems and GPS to provide solutions for engineering and geospatial professionals.

PCI Geomatics

50 West Wilmot Street
Richmond Hill, Ontario
Canada L4B 1M5
(905)764-0614; (905)764-9604 (Fax)
www.pci-geomatics.com

PCI Geomatics is a world-leading developer of geospatial software, specializing in remote sensing, digital photogrammetry, spatial analysis, cartographic production, and automated production systems. With our trusted Geomatica® brand, PCI Geomatics provides all the image-centric solutions necessary to meet the expectations of a large and expanding industry. For 25 years, PCI Geomatics and its reputation has grown as a result of innovative leadership, strong technology partnerships, active geomatics community involvement, and dedication to our customers.

Photo Science, Inc.

2670 Wilhite Drive
Lexington, KY 40503
(859)277-8700; (859)277-8901 (Fax)
www.photoscience.com

Founded in 1974, Photo Science is a full-service geospatial firm, specializing in aerial imaging and data collection, photogrammetric mapping, GIS, remote sensing, and surveying services. Our 170 professional and technical staff members are devoted exclusively to providing geospatial services to private sector customers, as well as federal, state, and local agencies. Headquartered in Lexington, KY, the company employs qualified professionals and support personnel in seven offices located in Florida, Georgia, Maine, Maryland, and Pennsylvania.

Photonics Spectra

2 South Street
Berkshire Common
Pittsfield, MA 01201
(413)499-0514; (413)442-3180 (Fax)
www.Photonics.com/spectra

Photonics Spectra is the leading photonics magazine serving industries that use photonic technology: lasers, imaging, fiber optics, optics, electro-optics, and photonic component manufacturing. It presents the latest news articles and in-depth reports on photonics technology. It is distributed free to those who use or apply photonics.

Point of Beginning (POB) magazine Booth 212

2401 W. Big Beaver Rd., Suite 700
Troy, MI 48084
(248)244-6400; (248)362-5103 (Fax)
www.pobonline.com

POB magazine is published to help the progressive surveying and mapping professional succeed. We achieve this mission by: Highlighting industry news, milestones and product coverage for better decision-making. Reporting on new applications and continually evolving technologies, including GPS, GIS and imaging. Providing practical solutions to the problems facing the geomatics industry, including professional business aspects, legal, legislative/educational issues and more! Qualify for your FREE subscription online at www.pobonline.com.

Booth 102

Professional Surveyor Magazine

Booth 122

Reed Business Geo, Inc.
100 Tuscanny Drive, Suite B-1
Frederick, MD 21702-5958 USA
(301)682-6101; (301)682-6105 (Fax)
www.profsurv.com

Professional Surveyor Magazine, is the premier U.S. resource for surveying, mapping, engineering, GPS, and GIS professionals. Monthly features include technology, product reviews, hands-on solutions, business management, trade show recaps, and more. Reed Business Geo, Inc. also publishes GIS Monitor, a popular online newsletter that provides coverage and analysis of the GIS industry. RBI-Geo (Netherlands) publishes GIM and Hydro as well as other trade journals. Both companies are part of Reed Elsevier.

Booth 813

QCoherent Software

Booth 807

1880 Office Club Pointe
Colorado Springs CO, 80920
(719)386-6900; (719)272-8051 (Fax)
www.qcoherent.com

QCoherent Software's mission is to develop LIDAR software that enables users of LIDAR data to easily and efficiently access and interface point cloud data with day-to-day operations. QCoherent Software is the innovative provider of high-capacity Limitless LIDAR™ software tools. Our extensive knowledge of LIDAR and GIS has been focused on the need for an ESRI extension for viewing, analyzing, and classifying standardized LAS LIDAR point clouds. Our efforts have culminated in the development of LP360.

Booth 815

RapidEye AG

Booth 715

MolkenMarkt 30
14776 Brandenburg, Germany
(800) 940 3617
www.rapideye.de

RapidEye is a global geo-information service provider based that owns and will launch five identical imaging satellites in late 2007. These satellites will pro-actively monitor vegetated and "at risk" areas of the world reliably and repetitively throughout the year at a 5-m pixel size. RapidEye staff are partnering with world-scale businesses to develop custom information services based on multi-temporal data analysis and include vegetation identification, land cover analysis, change detection and feature extraction.

Riegl USA

Booth 604

7035 Grand National Dr. Suite 100
Orlando, FL 32819
(407)248-9927
www.rieglusa.com

RIEGL's 3D terrestrial laser scanner business is founded on the company's 25-year heritage in research, development and manufacture of time-of-flight-based optical radar systems. In addition to 3D scanners, RIEGL offers a wide range of single-point laser measurement devices including pulsed semiconductor laser rangefinders, distance, level, and peripheral positioning equipment. Today RIEGL's 3D laser scanners are winning recognition as effective tools for capturing transportation, civil infrastructure and other large-scale assets, and for ruggedness and reliability under demanding environmental conditions.

Exhibitor Descriptions

Rollei Metric GmbH

Salzdahlumer StraBe 196
D-38126 Braunschweig
05 31-68 00 239; 05 31-68 00 303 (Fax)
www.rolleimetric.com

The RolleiMetric GmbH is a leading company in the sector of photogrammetry. Among photogrammetric cameras for terrestrial and aerial application the RolleiMetric GmbH offers a wide range of photogrammetric software. Additional to their own camera and software products, Rollei Metric acts as system- and selling partner of BAE Systems (USA) for the photogrammetric software package SO CET SET as well as for the company Panoscan (USA) and their digital panorama camera Mark III.

Safe Software Inc.

Suite 2017, 7445 132nd Street
Surrey, BC, Canada
V3W1J8
(604)501-9985 x311; (604)501-9965 (Fax)
www.safe.com

Established in 1993, Safe Software is the maker of FME, a spatial ETL (Extract, Transform and Load) tool that enables translation, transformation, and web-based distribution of geospatial data in over 160 GIS, CAD, raster and database formats. FME is used in over 116 countries by all levels of government, the utilities sector, and resource industries including mining, oil and gas, and forestry. The latest release of FME features over 13 new transformers for raster data.

Spectral Instruments, Inc.

420 N. Bonita Ave.
Tucson, AZ 85745
(520)884-8821; (520) 884-8803 (Fax)
www.specinst.com

Spectral is showing a large format CCD camera. The camera is fitted with a 111-million pixel CCD that supports readout from 16 ports simultaneously. This is a camera that can be used for imaging as a monochrome sensor or as a Bayer-masked color sensor. The 12-bit dynamic range, large format and high pixel count make it ideal for digital aerial imaging. The sensor consists of 10580 x 10560 9-micron pixels.

Stora Enso Wood Supply

Talvikkitie 40 C, 01300 Vantaa
FINLAND
+358-20-4624953
www.ensomosaic.com

Stora Enso develops and distributes EnsoMOSAIC for digital aerial image capture and processing. EnsoMOSAIC system contains all software and hardware components for independent aerial imaging. EnsoMOSAIC software automatically rectifies thousands of digital images on a single run, and joins them into a large ortho-rectified and georeferenced mosaic. EnsoMosaic is result of ten years development and hard testing. The software is used in all continents to process imagery collected by a variety of aerial sensors in any flying scheme.

Surdex Corporation

520 Spirit of St. Louis Blvd.
Chesterfield, MO 63005
(636)532-3427; (636)537-9638 (Fax)
www.surdex.com

Since 1954 Surdex Corporation has kept abreast of the newest technology, maintaining a high standard of accuracy and going above and beyond client expectations in designing custom projects specific to the client's needs. Surdex maintains a fleet of aircraft; aerial data acquisition capabilities include black & white, color and infrared photography,

Booth 710

digital multi-spectral imagery and LiDAR elevation data. Photogrammetric product generation capabilities include planimetric data, topographic data and digital Orthophotography.

TerraSim Inc.

One Gateway Center, Suite 2050
420 Fort Duquesne Blvd.
Pittsburgh, PA 15222
(412) 232-3646; (412) 232-3649 (Fax)
www.terrasim.com

TerraSim, Inc. provides software solutions and services for advanced geospatial visualization. TerraTools(R) 3.0 employs innovative technology to seamlessly create realistic simulations with full geospatial accuracy. High-performance 3D visualization and interactive 3D GIS feature query are delivered through our TSGFly(tm) 5.0 and TerraTours(R) 3.0 viewers. DEMTools and RoadMAP from TerraSim(R) are standalone source data preparation solutions for automated geospatial data processing. Visit booth 307 to learn how products from TerraSim can exceed your geospatial visualization requirements.

Terrasolid Ltd.

Ylistonmaentie 31
40500 Jyvaskyla
Finland
358 400 648 391; 358 14 645002 (Fax)
www.terrasolid.com

Terrasolid is a leading software developer for processing Lidar data and images captured during the mission. The major strength of the Terrasolid packages - TerraScan, TerraModeler, TerraPhoto and TerraMatch is their seamless integration with each other. Please do not pass Terrasolid if you orthorectify images. Color points of images can now be created automatically and interactively edited while viewing the resulting orthophoto mosaic. This revolutionary on-the-fly display of an orthophoto mosaic sets TerraPhoto apart from other solutions.

Topographic Engineering Center Booth 801

7701 Telegraph Rd.
Alexandria, VA 22315
(703)428-6600; (703)428-6635 (Fax)
www.tec.army.mil

The U.S. Army Topographic Engineering Center (TEC) located in Alexandria, Va. is one of seven laboratories, which make up the Corps of Engineers' Engineer Research and Development Center (ERDC). TEC's mission is to provide the warfighter with superior knowledge of the battlefield, and to support the nation's civil and environmental initiatives through research, development, and the application of expertise in the topographic and related sciences.

TopoSys Topographische

Systemdaten GmbH
0049 7351/47402-0; 0049 7351/47402-31 (Fax)
www.toposys.com

TopoSys GmbH was founded in 1996. Through our dual role as an established sensor operator within Europe and Lidar system manufacturers, TopoSys enjoys a unique position. Our customers and partners tremendously benefit from the access to this unique know-how from our sensor operation to map production and consulting services in customer-specific applications. Since 2007, TopoSys North America Inc., located in Denver Colorado, serves as a sales and support center with knowledgeable staff for our Lidar systems in North America.

Booth 712

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Total Aircraft Services, Inc.

16300 Lindbergh Street
Van Nuys, California 91406
(818) 781-9650 - (818) 781-7656 (Fax)
www.tasaircraft.com

TRACK'AIR B.V.

Zutphenstraat 5
7575 EJ Oldenzaal
The Netherlands
31 541 229 030; 31 541 229 033 (Fax)
www.trackair.com

TRACK' AIR B.V. is developing and distributing affordable and effective tools to the worldwide aerial survey community. X-track, the main product of the company, is a multipurpose aerial survey management system that can be operated with a large variety of aerial survey equipment. To date, almost 600 organizations are operating the X-track system worldwide. Introduced in May 2006, the TRACK' AIR MIDAS system is the first commercially available digital oblique photography system for 3D mapping.

U.S. Geological Survey (USGS) Booth 112

Center for Earth Resources Observation and Science (EROS)
Mundt Federal Building
Sioux Falls, SD 57198
(605) 594-6151; (605) 594-6589 (Fax)
<http://eros.usgs.gov>

Satellite data is a vital component of an incredible array of study that includes areas such as wildfire mapping, crop identification, timber harvesting, desertification, climate change, habitat suitability, and urban expansion. EROS staff downlink data from satellites, and manage distribute and archive those data for scientists, policy makers, educators, and the general public. The EROS Science staff process and analyze data to better understand the Earth, and the natural and human forces that change it.

Visual Learning Systems Booth 811

1719 Dearborn Ave.
Missoula, MT 59801
(406) 829-1384; (406) 829-3593 (Fax)
www.vls-inc.com

VLS is the international leader in automated mapping and image intelligence solutions. VLS' product line includes Feature Analyst®, LIDAR Analyst®, and Urban Analyst.™ These award-winning software products provide solutions for thousands of customers both domestically and abroad. VLS is a wholly owned subsidiary of Overwatch Systems, a Textron Systems Company.

Booth 130

VXServices, LLC

1230 Hunter Court
Longmont, CO 80501
(303) 651-6519; (303) 651-7693 (Fax)
www.vxservices.com

VXServices, LLC is the world wide manufacturer and service provider for the VX4000 photogrammetric scanning system. The VX4000, a system used on six continents, incorporates the continually self-referencing invisible reseau glass grid and true resolution scanning. VXServices provides unparalleled service to our customers, and we now bring that same level of commitment to our new joint venture: DIMAC Systems, LLC. As manufacturers of the most innovative digital aerial camera available, we continue our tradition in photogrammetric imaging hardware

Booth 202

Wehrli & Associates Inc. Booth 501

7 Upland Drive
Valhalla, New York 10595
(914)831-9821
www.wehriassoc.com

We will be displaying the 3-DAS-1 Digital Aerial Camera, ASP-1 Stabilized Platform along with a complete software suite. Our digital aerial cameras (3-DAS-1 and 3-OC) are the latest in uncomplicated push-broom aerial cameras with finest radiometry (Kodak sensors). They are interfaced to nearly all IMU/GPS systems. Each features a highly modular three-camera head design capable of acquiring 9 channels of image data as well as easy maintenance. The ASP-1 features a robust, kinematic construction, highly accurate motion in roll, pitch and yaw with real-time feedback and recording, interfaced to IMU/GPS.

Western Air Maps, Inc. Booth 200

9401 Reeds Road
Overland Park, KS 66207
(800)643-5177; (913)652-9933 (Fax)
www.westernair.com

Successful geospatial projects depend on timely and accurate geospatial information. Western Air Maps, Inc. was founded on a principle of providing our clients with quality imagery and mapping solutions. In every geospatial project, we blend traditional mapmaking and surveying skills with the latest technological solutions. Our dedication to quality is demonstrated by consistent repeat business and referral. WAM provides professional services in primary data acquisition, GPS surveying, GIS, LiDAR processing, data extraction, and much more.

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Hotel Floor Plan

